

=> d his

(FILE 'HOME' ENTERED AT 09:46:12 ON 17 DEC 2008)

FILE 'REGISTRY' ENTERED AT 09:46:25 ON 17 DEC 2008

L1 STRUCTURE UPLOADED

L2 3 S L1

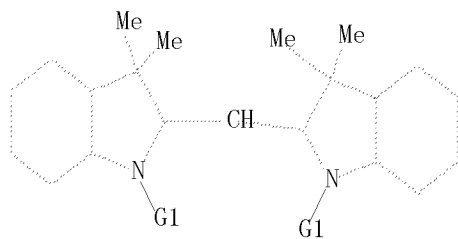
L3 119 S L1 FULL

FILE 'CAPLUS' ENTERED AT 09:47:13 ON 17 DEC 2008

L4 74 S L3

=> d que l4 stat

L1 STR



G1 Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu

Structure attributes must be viewed using STN Express query preparation.

L3 119 SEA FILE=REGISTRY SSS FUL L1

L4 74 SEA FILE=CAPLUS ABB=ON PLU=ON L3

=> d 1-74 bib abs hitstr

L4 ANSWER 1 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2008:1167634 CAPLUS
 DN 149:482320
 TI Recordable medium for recording and reproducing optical information by irradiating short wavelength laser
 IN Kodaira, Takuro; Matsuta, Isao; Ohtsu, Takeshi; Hara, Humi
 PA Taiyo Yuden Co., Ltd., Japan
 SO Faming Zhanli Shengqing Gongkai Shuomingshu, 20pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 101271708	A	20080924	CN 2008-10085085	20080317
JP 2008262671	A	20081030	JP 2008-27142	20080207
IN 2008DE00644	A	20081121	IN 2008-DE644	20080314
US 20080260984	A1	20081023	US 2008-61627	20080319
PRAI JP 2007-72520	A	20070320		
JP 2008-27142	A	20080207		

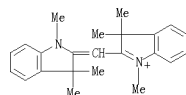
AB The title recordable medium for recording and reproducing optical information by irradiating short wavelength laser has spiral or annular guiding grooves formed on a substrate, and an optical recording layer mainly composed of organic pigment material. Information can be recorded by irradiating short wavelength laser from the optical recording layer side; and the above information can be reproduced by reading variation of reflected light of short wavelength laser. The recording polarity type is low-to-high (LTH). A refractive index n of the optical recording layer without information recorded thereon is in the range of 1.2-2.1, an attenuation coefficient k is in the range of 0.01-0.7, and (n/k) is in the range of 1.4-2.1.

IT 1071199-10-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (recordable medium for recording and reproducing optical information containing)

RN 1071199-10-4 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

CRN 16919-18-9
 CMF F6 F
 CCI CCS

L4 ANSWER 2 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2008:1101785 CAPLUS
 DN 149:366321
 TI Compounds for photoresists giving good fine surface processing
 IN Watanabe, Tetsuya; Usami, Yoshihisa
 PA Fujifilm Corporation, Japan
 SO PCT Int. Appl., 119pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2008108406	A1	20080912	WO 2008-JP53954	20080305
W: AB, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BC, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI JP 200825066	A	20081016	JP 2007-196756	20070727
JP 2007-54289	A	20070305		
JP 2007-196756	A	20070727		
JP 2007-212149	A	20070816		
JP 2007-267664	A	20071015		
JP 2007-267665	A	20071015		
JP 2008-47127	A	20080228		
JP 2008-47150	A	20080228		
JP 2008-47237	A	20080228		
JP 2008-47238	A	20080228		
JP 2008-47243	A	20080228		

AB The present invention relates compds. selected from compds. having an oxazol dye skeleton, cyanine dyes, styryl dyes, compds. having a merocyanine dye skeleton, compds. having phthalocyanine dye skeleton, azo compds., and a complex compound of an azo compound with a metal ion. Thus, 2 g 1,1'-bis(6-hydroxy[1,1'-biphenyl]-3-yl)-4,4'-bipyridinium 3-[(4-hydroxy-2-oxo-1,5-dioxaspiro[5.5]undec-3-en-3-yl)methylene]-1,5-dioxaspiro[5.5]undecane-2,4-dione (λ_{max} 378 nm, decomposition temperature 216°) dissolved in 100 mL tetrafluoropropanol was spin-coated onto a silicon substrate, irradiated with a laser to form a pit, etch, and removed the coating from the substrate to form a ruggedness, showing good pit.

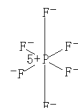
IT 103998-41-0 1065329-31-1 1065329-32-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (compds. for photoresists giving good fine surface processing)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CMF C23 H27 N2

L4 ANSWER 1 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

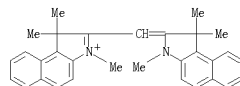
CRN 14797-73-0
 CMF C1 O4



RN 1065329-31-1 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

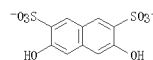
CM 1

CRN 157075-00-8
 CMF C31 H31 N2



CM 2

CRN 153340-59-1
 CMF C10 H6 O8 S2

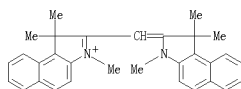


RN 1065329-32-2 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 157075-00-8
 CMF C31 H31 N2

L4 ANSWER 2 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 22713-47-9

CMF C10 H6 O6 S2

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

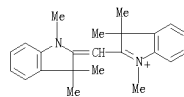
L4 ANSWER 3 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:318858 CAPLUS
DN 148:366632
TI Optical disks having visible image-recording layer
IN Shibata, Michihiro; Mikami, Tatsuo; Mikoshiba, Hisao
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 73pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2008059701	A	20080313	JP 2006-236773	20060831
FRAI JP 2006-236773		20060831		
OS MARPAT 148:366632				
AB				
The title optical disk has a laser beam-sensitive visible image-recording layer, wherein the image recording layer has ≥8% reflection index and satisfies the equation: 30≤L*≤70 for colorimetric coordinates as a blank layer. The disk provides high contrast visible images on the back.				
IT 103998-41-0				
RL: TEM (Technical or engineered material use); USES (Uses) (dye in visible image-forming layer on optical disks)				
RN 103998-41-0 CAPLUS				
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)				

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

CMF C1 O4



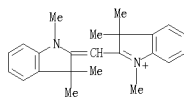
L4 ANSWER 4 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:318857 CAPLUS
DN 148:366631
TI Optical disks having visible image-recording layer
IN Shibata, Michihiro; Mikami, Tatsuo; Mikoshiba, Hisao
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 73pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2008059700	A	20080313	JP 2006-236767	20060831
FRAI JP 2006-236767		20060831		
OS MARPAT 148:366631				
AB				
The title optical disk has a laser beam-sensitive visible image-recording layer, wherein the image recording layer has ≥8% reflection index and satisfies the equation: 30≤L*≤70 for colorimetric coordinates as a blank layer. The disk provides high contrast visible images on the back.				
IT 103998-41-0				
RL: TEM (Technical or engineered material use); USES (Uses) (dye in visible image-forming layer on optical disks)				
RN 103998-41-0 CAPLUS				
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)				

CM 1

CRN 61575-70-0

CMF C23 H27 N2



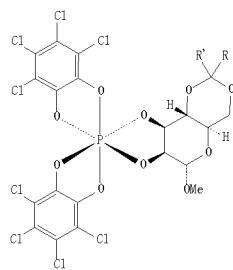
CM 2

CRN 14797-73-0

CMF C1 O4



L4 ANSWER 5 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:269272 CAPLUS
DN 148:068807
TI Sugar derived hexacoordinated phosphates: chiral anionic auxiliaries with general asymmetric efficiency
AU Perollier, Celine; Bernardinelli, Gerald; Lacour, Jerome
CS Department of Organic Chemistry, University of Geneva, Geneva, CH-1211/4, Switz.
SO Chirality (2008), 20(3/4), 313-324
CODEN: CHIRLEP; ISSN: 0899-0042
FB Wiley-Liss, Inc.
DT Journal
LA English
GI



I

AB Mannose-derived hexacoordinated phosphate anions ex. (I, R = Ph, Me, H; R' = H, Me), prepared in as few as two steps from Me-α-D-mannopyranoside and tris(dimethylamino)phosphine, are chiral anionic auxiliaries with broad asym. efficiency. These chemical robust anions are effective NMR chiral solvating agents and efficient asymmetry-inducers, able to control the configuration of conformationally labile C2-sym. monomethinium cations (organic, helical, charge 1+, P or M enantiomers) and D3-sym. Fe(II) tris(bhenanthroline) complexes (metallo-organic, octahedral, charge 2+, A or A enantiomers). Diastereomeric control with often unmatched selective levels was achieved with the help of mannopyranoside backbone of the anions and the substituents on the [1,3]dioxane ring that play a key role in the recognition process, something not obvious at 1st sight.

IT 61575-71-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of mannose derived hexacoordinated phosphates as chiral anionic auxiliaries with general asym. efficiency)

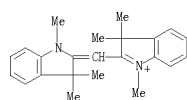
RN 61575-71-1 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate (1-) (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

L4 ANSWER 5 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
CMF C23 H27 N2



CM 2

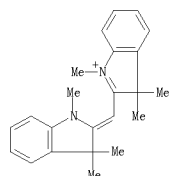
CRN 14874-70-5
CMF B P4
CCI CCS



IT 1021160-63-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of mannose derived hexacoordinated phosphates as chiral anionic
auxiliaries with general asym. efficiency)
RN 1021160-63-3 CAPLUS
CN 3H-Indolium, 2-[(2)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-
ylidene)methyl]-1,3,3-trimethyl-, stereoisomer, (OC-6-31-A)-[methyl
4,6-O-(1-methylethylidene)-α-D-mannopyranosidato(2-)-
κO2,κO3]bis[3,4,5,6-tetrachloro-1,2-benzenediolato(2-)-
κO1,κO2]phosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 1021160-62-2
CMF C23 H27 N2



L4 ANSWER 6 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 20071395888 CAPLUS
DI 148:42448
TI Optical disk, information recording method, and information reproducing
method
IN Umezawa, Kazuyo; Morita, Seiji; Takazawa, Koji; Ando, Hideo; Otera,
Yasuaki; Nakamura, Naomasa; Morishita, Naoki
PA Kabushiki Kaisha Toshiba, Japan
SO Eur. Pat. Appl., 59pp.
CODEN: EPXKDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1863026	A2	20071205	EP 2007-109208	20070530
EP 1863026	A3	20080102		

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA, HR, MK, YU

JP 2007323719	A	20071213	JP 2006-151584	20060531
US 20070281123	A1	20071206	US 2007-752705	20070523
IN 2007DE01138	A	20071207	IN 2007-DE1138	20070529
CN 101083097	A	20071205	CN 2007-10105910	20070531

PRAI JP 2006-151584 A 20060531
AB A re-recordable write-once optical disk by which recording/reproducing can
be properly done with a short-wavelength blue laser is provided. The disk
has recording layers on which marks are recorded by the laser power of a
modulated short wavelength, with a space formed between the recorded
marks. The recording layer of the disk uses an organic dye material by which
no phys. modification or no phys. change substantially occurs in an area
of the recorded marks.

IT 866757-26-8
RL: TEM (Technical or engineered material use); USES (Uses)
(optical disk, information recording method, and information
reproducing method)

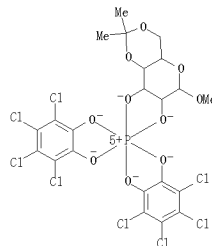
RN 866757-26-8 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[2-[2-(hydroxy-
κO)-5-nitrophenyl]diazonyl-κN1]-4-methyl-2-oxo-6-(oxo-
κO)-3-pyridinecarboxylato(2-)]cobaltate(1-) (1:1) (CA INDEX
NAME)

CM 1

CRN 330442-50-7
CMF C34 H30 Co N10 O10
CCI CCS

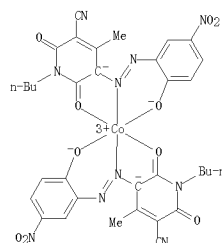
L4 ANSWER 5 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
CM 2

CRN 1020725-83-0
CMF C22 H16 Cl8 O10 P
CCI CCS



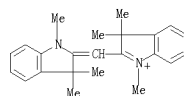
RE.CNT 91 THERE ARE 91 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 61575-70-0
CMF C23 H27 N2

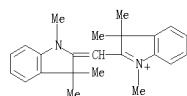


L4 ANSWER 7 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2007:139692 CAPLUS
 DN 148:21184
 TI Optical disk, information recording method, information reproducing method, and disk drive
 IN Yoshida, Nobuhisa; Otera, Yasuaki; Umezawa, Kazuyo; Nakamura, Naomasa; Takazawa, Koji; Ando, Hideo
 PA Kabushiki Kaisha Toshiba, Japan
 SO Eur. Pat. Appl., 26pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1863025	A2	20071206	EP 2007-109206	20070530
EP 1863025	A3	20080730		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU, RS				
JP 2007323773	A	20071213	JP 2006-155109	20060602
US 20070280095	A1	20071206	US 2007-755921	20070531
CN 101083096	A	20071206	CN 2007-10108866	20070601
FRAI JP 2006-155109	A	20060602		

AB A write-once optical disk which uses a short-wavelength laser (wavelength = 600 nm or less) allows BCA information recording even using a long-wavelength laser (wavelength falling within a range from 600 nm to 800 nm). To this end, a groove is cut in advance on a BCA part on a molded substrate of the optical disk to store a dye. In this way, the sensitivity of the dye in the BCA increases, to allow a laser having a wavelength (a wavelength falling within the range from 600 nm to 800 nm) other than the wavelength (e.g., 405 nm) corresponding to information recording of the dye to record a barcode pattern on the BCA.

IT 61575-70-0 866757-26-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical disk, information recording method, information reproducing method, and disk drive)
 RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)



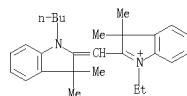
RN 866757-26-8 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[2-[2-(hydroxy-κO)-5-nitrophenyl]diazanyl-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarboxylato(2-)]cobaltate(1-) (1:1) (CA INDEX NAME)

CM 1

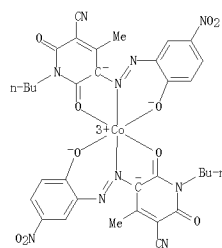
CRN 330442-50-7

L4 ANSWER 8 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2007:910870 CAPLUS
 DN 147:265791
 TI Optical recording material containing azo-metal complex and cationic dye
 IN Shinkai, Masahiro; Tanabe, Junji
 PA Tdk Corporation, Japan
 SO Jpn. Kokai Tokkyo Koho, 16pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007207324	A	20070816	JP 2006-23597	20060131
FRAI JP 2006-23597		20060131		
OS MARPAT 147:265791				
AB The material has a recording layer containing the azo-metal complex and cationic dye, and satisfies $k > 0.20$. (k = imaginary part of the complex refractive index to 405 nm light). The material shows good recording and reading properties by blue laser beam.				
IT 945963-06-4				
RL: TEM (Technical or engineered material use); USES (Uses) (optical recording material containing azo-metal complex and cationic dye)				
RN 945963-06-4 CAPLUS				
CN 3H-Indolium, 2-[(1-butyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl- (CA INDEX NAME)				



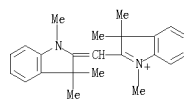
L4 ANSWER 7 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CMF C34 H30 Co N10 O10
 CCI CCS



CM 2

CRN 61575-70-0

CMF C23 H27 N2



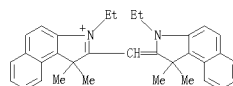
L4 ANSWER 9 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2007:722151 CAPLUS
 DN 147:154071
 TI Double-layered blue laser optical recording material
 IN Endo, Nobumasa; Ishizaki, Osamu
 PA Hitachi Maxell Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007172683	A	20070705	JP 2005-365107	20051219
FRAI JP 2006-365107		20061219		
AB The material comprises a first dye-containing layer in which information is recorded by blue laser transmitted through a transparent substrate and a second dye-containing layer in which information is recorded, e.g. under approx. the same sensitivity as the first layer recording, by the blue laser transmitted through the 1st layer. The reflectance of the recorded part and the nonrecorded part satisfy $R_{00} < R_{01}$ and $R_{10} < R_{11}$, where R_{01} is the reflectance at the recorded part and R_{00} is that at the nonrecorded part for the first layer and R_{10} and R_{11} are those for the second layer. Also claimed is the materials prepared by lamination of a first transparent substrate equipped with a first dye layer and a transreflective layer and a second substrate equipped with a reflective layer, a second dye layer, and an interfacial layer, under insertion of a transparent interlayer.				
IT 943307-36-6				
RL: TEM (Technical or engineered material use); USES (Uses) (second dye layer; double-layered blue laser optical recording materials)				
RN 943307-36-6 CAPLUS				
CN 1H-Benz[e]indolium, 3-ethyl-2-[(3-ethyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1-dimethyl-, bis[2-[2-[4-(dimethylamino)-2-(hydroxy-κO)phenyl]diazanyl-κN2]-1H-imidazole-4,5-dicarbonitrilato(2-)-κN1]cobaltate(1-) (1:1) (CA INDEX NAME)				

CM 1

CRN 943307-35-5

CMF C33 H35 N2



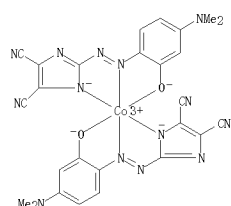
CM 2

CRN 943307-34-4

CMF C26 H18 Co N14 O2

CCI CCS

L4 ANSWER 9 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 10 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:665368 CAPLUSDN 147:82800
TI Manufacture of WORM disks for blue laser recording/readout by spin coating of organic dye recording layers and polycarbonate substrates for them
IN Uchida, Naoyuki; Hoshino, Hiroyuki; Kawano, Satoshi; Kirifuji, Yukari
PA Mitsubishi Chemical Media Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 32pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007152825	A	20070621	JP 2005-353204	20051207
JP 2005-353204		20051207		

AB In the manufacture, concentrically or spirally grooved substrates are spin-coated with organic dye solns. through nozzles while rotating the substrates and smoothly moving the nozzles from inner to outer circumferences at average rate 5-15 mm/s. Discharging of the solns. from the nozzles is stopped at a position Rstop satisfying $30.0 \text{ mm} \leq R_{\text{stop}} \leq (R_{\text{disk}} - 1.0) \text{ mm}$ (R_{disk} = radius of the disks $\geq 40 \text{ mm}$). Manufactured optical disks are also claimed. The substrates have in-plane birefringence from -30 to +10 nm at $650 \pm 5 \text{ nm}$ and maximum-min. birefringence difference $\leq 35 \text{ nm}$. Uniform-thickness recording layers are manufactured by the above method.

IT 866757-26-8

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of WORM disks for blue laser recording/readout by spin coating of organic dye recording layers on polycarbonate substrates)

RN 866757-26-8 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[2-[2-(hydroxy-4-nitrophenyl)diazenyl-4-methyl-2-oxo-6-(oxo-3-pyridinecarboxylato(2-))]cobaltate(1-)] (1:1) (CA INDEX NAME)

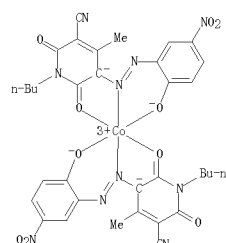
CM 1

CRN 330442-50-7

CMF C34 H20 Co N10 O10

CCI CCS

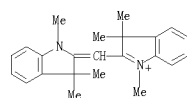
L4 ANSWER 10 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 61575-70-0

CMF C23 H27 N2

L4 ANSWER 11 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:277328 CAPLUS

DN 146:326486

TI Dye showing good optical modulation and improved storage stability, optical recording material, and optical recording medium
IN Shinkai, Masahiro; Tanabe, Junshi; Tsuchiya, Masahiro
PA Tdk Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 17pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007062214	A	20070615	JP 2005-252594	20050831
JP 2005-252594		20050831		

AB The invention relates to an optical recording (subphthalocyanine) dye capable of recording using a recording wavelength λ_L ($400 \leq \lambda_L \leq 420 \text{ nm}$), wherein the dye has a first absorption peak at $< \lambda_L \text{ nm}$ and a second absorption peak at $> \lambda_L \text{ nm}$ and the first absorption peak has a specified halfwidth value.

IT 929034-04-8

RL: TEM (Technical or engineered material use); USES (Uses)
(dye showing good optical modulation and improved storage stability, optical recording material, and optical recording medium)

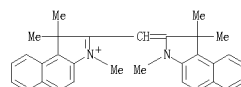
RN 929034-04-8 CAPLUS

CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 157075-00-8

CMF C31 H31 N2

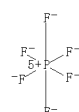


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



L4 ANSWER 12 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:277284 CAPLUS

DN 146:326483

TI Dye showing good optical modulation and improved storage stability, optical recording material, and optical recording medium

IN Shinkai, Masahiro; Tanabe, Junshi; Tsuchiya, Masahiro

PA Tdk Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 17pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007062212	A	20070315	JP 2005-252586	20050831

PI JP 2007062212

PRAI JP 2005-252586

AB The invention relates to an optical recording (subphthalocyanine) dye capable of recording using a recording wavelength λ_L (400 $\leq\lambda_L\leq$ 420 nm), wherein the dye has a first refractive index peak at 300 $\sim\lambda_L$ nm and a second refractive index peak at 450 \sim 700 nm.

IT 929034-04-8

RL: TEM (Technical or engineered material use); USES (Uses) (dye showing good optical modulation and improved storage stability, optical recording material, and optical recording medium)

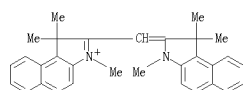
RN 929034-04-8 CAPLUS

CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 157075-00-8

CMF C31 H31 N2

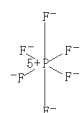


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



L4 ANSWER 13 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:842061 CAPLUS

DN 145:281352

TI Optical recording medium

IN Nakataki, Yoshiyuki; Ota, Hironori

PA Hitachi Maxell, Ltd., Japan

SO U.S. Pat. Appl. Publ., 11pp.

CODEN: USXXCO

DT Patent

LA English

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060190958	A1	20060824	US 2006-357103	20060221
JP 2006236476	A	20060907	JP 2005-49528	20050224
CN 1825447	A	20060830	CN 2006-10068026	20060223

PI US 20060190958

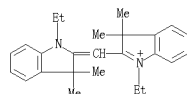
PRAI JP 2005-49528

AB An optical recording medium including two recording layers, each containing an organic dye includes: a first disk substrate formed by laminating a first recording layer and a translucent intermediate layer sequentially on a first transparent substrate made of polycarbonate or the like; and a second disk substrate formed by laminating a reflective layer, a second recording layer, and an interface layer sequentially on a second substrate. The first and the second disk substrates are laminated with a transparent adhesive layer interposed there between in a manner that the translucent intermediate layer faces the interface layer. A reflectivity (R1) at a portion of a recording mark formed on any of the first and the second recording layers becomes higher than a reflectivity (R0) at a portion on the recording layer where the recording mark is not formed (R1>R0).

IT 802280-18-8D, salts with monomethine-azo cobalt dye
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (organic dye-containing multilayer optical recording medium)

RN 802280-18-8 CAPLUS

CN 3H-Indolium, 1-ethyl-2-[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl- (CA INDEX NAME)



L4 ANSWER 12 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

L4 ANSWER 14 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:789752 CAPLUS

DN 145:219801

TI Manufacture of metal structure having metal film on substrate

IN Hashiba, Toshio; Yoshida, Hiroshi; Akaboshi, Haruo; Suzuki, Hitoshi

PA Hitachi Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006206950	A	20060810	JP 2005-19595	20050127
US 20060180472	A1	20060817	US 2006-340670	20060127
CN 1831205	A	20060913	CN 2006-10062424	20060127

PI JP 2005-19595

PRAI JP 2005-19595

AB The method comprises forming the metal film-forming part of a substrate from an elec. conductor having rugged surface and forming preferentially a metal film on the rugged surface of the elec. conductor by electroplating. Cu or Cu alloy is preferably electroplated. Optionally, cyanine dye is added to the electroplating bath.

IT 103998-41-0
RL: TEM (Technical or engineered material use); USES (Uses) (method for manufacturing metal structure by preferential electroplating of copper or copper alloy on elec. conductor having rugged surface formed on substrate)

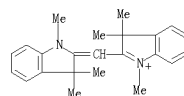
RN 103998-41-0 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

CMF C1 O4



L4 ANSWER 15 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2006:740407 CAPLUS
 DN 145:178784
 TI Wiring board and production method thereof
 IN Haba, Toshio; Yoshida, Hiroshi; Akahoshi, Haruo; Suzuki, Hitoshi; Chinda, Akira
 PA Japan
 SO U.S. Pat. Appl. Publ., 18 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20060163725	A1	20060727	US 2005-205175	20050817
JP 2006210565	A	20060810	JP 2005-19437	20050127
US 20060251287	A1	20061016	US 2008-137582	20080612
PRAI JP 2005-19437	A	20050127		
US 2005-205175	A3	20050817		

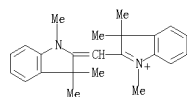
AB It is an object of the present invention to provide a wiring board having high-d. wiring with a controlled shape without masking by a resist film and a production method thereof. In the present invention, the production method of a wiring board having copper wiring on an insulating substrate includes the steps of forming a metal seed layer on the insulating substrate, the metal seed layer having a roughened shape in a portion on which the copper wiring or a bump is to be formed, and forming an electroplated film of copper or an alloy of copper through electroplating on the portion of the metal seed layer having the roughened shape. A substance for suppressing the plating reaction is added to a plating bath to provide an angle of 90 degrees or smaller between a surface of the insulating substrate and a side of the electroplated film.

IT 103998-41-0
 RL: PMU (Formation, unclassified); TEM (Technical or engineered material use); FORM (Formation, nonpreparative); USES (Uses)
 (high d. wiring board with controlled shape with resist masking)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

CRN 14797-73-0
 CMF Cl 04

L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2005:1125631 CAPLUS
 DN 143:396410
 TI Write-once information recording medium and dyes therefor
 IN Morita, Seiji; Takazawa, Koji; Morishita, Naoki; Nakamura, Naomasa; Aizawa, Yasushi; Koyama, Yoshinori
 PA Kabushiki Kaisha Toshiba, Japan; Hayashibara Biochemical Laboratories, Inc.
 SO Eur. Pat. Appl., 32 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1587092	A2	20051019	EP 2005-102627	20050404
EP 1587092	A3	20060419		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2005297407	A	20051027	JP 2004-118345	20040413
CN 1694167	A	20051109	CN 2005-10065179	20050413
KR 2006045666	A	20060517	KR 2005-50727	20050413
PRAI JP 2004-118345	A	20040413		
OC MARPAT 143:396410				

AB A write-once information recording disk has a transparent substrate having concentric or spiral grooves formed therein, and a recording film formed on the grooves on the transparent substrate, wherein the recording groove has an anion portion and a pigment portion, being formed of one organic pigment of which maximum absorption wavelength region from the wavelength of short wavelength laser light to be emitted to the recording film is present at the longer wavelength side, a recording mark is formed on the recording film by irradiation with short wavelength laser light, and the recording mark has a higher light reflectivity than the light reflectivity of the recording film before irradiation with the short wavelength laser light. Therefore, the write-once type optical disk has a so-called low-to-high characteristic, i.e., the reflectivity is higher after recording than before recording.

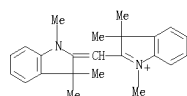
IT 103998-41-0 866757-26-8 866757-28-0
 866757-29-1 866757-33-7 866757-35-9
 866757-37-1 866757-39-3

RL: TEM (Technical or engineered material use); USES (Uses)
 (write-once information recording medium containing dyes)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

L4 ANSWER 15 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



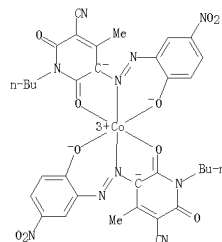
L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CRN 14797-73-0
 CMF Cl 04



RN 866757-26-8 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[2-[(hydroxy- κ O)-5-nitrophenyl]diazanyl- κ N]]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (1:1) (CA INDEX NAME)

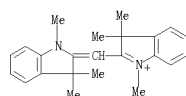
CM 1

CRN 330442-50-7
 CMF C34 H50 Co N10 O10
 CCI CCS



CM 2

CRN 61575-70-0
 CMF C23 H27 N2

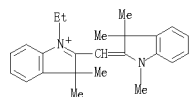


RN 866757-28-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[2-(hydroxy-

L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 (K0)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

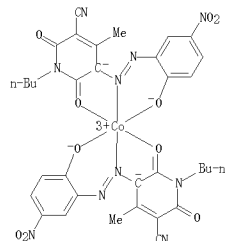
CM 1

CRN 866757-27-9
 CMF C24 H29 N2



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



RN 866757-29-1 CAPLUS
 CN 3H-Indolium, 1-ethyl-2-[(1-ethyl-3,3-dimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

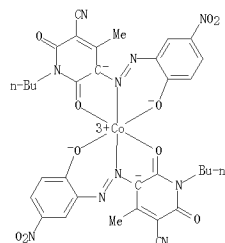
CM 1

CRN 802280-18-8
 CMF C25 H31 N2

L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 2

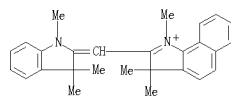
CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



RN 866757-35-9 CAPLUS
 CN 3H-Benz[g]indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

CM 1

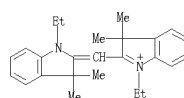
CRN 866757-34-8
 CMF C27 H29 N2



CM 2

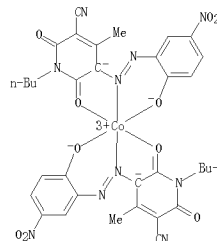
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 CMF C34 H30 Co N10 O10
 CCI CCS

L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

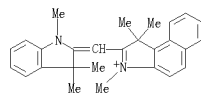
CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



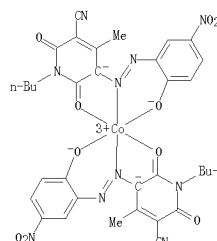
RN 866757-33-7 CAPLUS
 CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,1,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 866757-32-6
 CMF C27 H29 N2



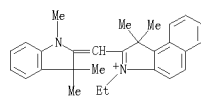
L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 866757-37-1 CAPLUS
 CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-ethyl-1,1-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

CM 1

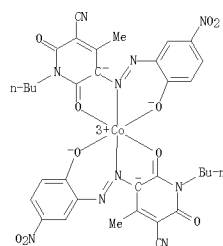
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 CMF C28 H31 N2



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS

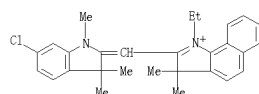
L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 866757-39-3 CAPLUS
 CN 3H-Benz[gl]indolium, 2-[(6-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)(9CI) (CA INDEX NAME)

CM 1

CRN 866757-38-2
 CMF C28 H30 Cl N2



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS

L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2005:1106715 CAPLUS

DI 143:396409
 TI Recording material for medium
 IN Morita, Seiji; Takazawa, Koji; Morishita, Naoki; Nakamura, Naomasa;
 Aizawa, Yasushi; Koyama, Yoshinori
 PA Kabushiki Kaisha Toshiba, Japan; Hayashibara Biochemical Laboratories,
 Inc.
 SO U.S. Pat. Appl. Publ., 26 pp.
 CODEN: USRXCO
 DT Patent
 LA English
 FAN CNT 1

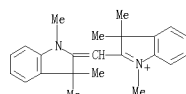
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20050227178	A1	20051013	US 2005-103646	20050412
JP 2005297406	A	20051027	JP 2004-118344	20040413
EP 1587093	A2	20051019	EP 2005-102631	20050404
EP 1587093	A3	20060419		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CZ, AL, TR, BG, GZ, EE, HU, PL, SK, BA, HR, TS, YU				
IN 2005DE00872	A	20061110	IN 2005-DE872	20050405
CN 1684171	A	20051019	CN 2005-10065178	20050413
KR 2006045657	A	20060517	KR 2005-30690	20050413
JP 2004-118344	A	20040413		

PRAI
 OS MARPAT 143:396409
 AB The present invention relates to a recording material for a medium used for the recording film of a write-once type information recording disk equipped with a transparent resin substrate on which concentric or spiral grooves were formed and a recording film which was formed on the grooves, characterized in that it is formed by one organic coloring matter having an anion portion and a coloring matter portion in which the maximum absorption wavelength zone exists at a longer wavelength side than the wavelength of short wavelength laser beam irradiated on the recording film and forms a record mark on the recording film by irradiation of the short wavelength laser beam, and the record mark has a higher optical reflection coefficient than the optical reflection coefficient of the recording film before irradiation of the short wavelength laser beam. This material realizes so-called Low to High property.

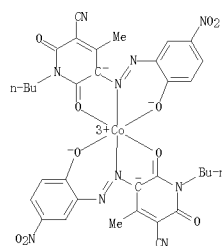
IT 103998-41-0 866757-26-8 866757-28-0
 866757-29-1 866757-33-7 866757-35-9
 866757-37-1 866757-39-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (organic coloring matter; recording material for medium containing)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1
 CRN 61575-70-0
 CMF C23 H27 N2



L4 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 866757-39-3 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]diazenyl-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)(1:1) (CA INDEX NAME)

CM 1

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS

L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CM 2

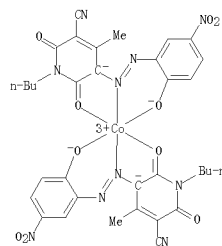
CRN 14797-73-0
 CMF Cl O4



RN 866757-26-8 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]diazenyl-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)(1:1) (CA INDEX NAME)

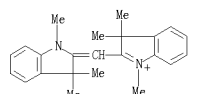
CM 1

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



CM 2

CRN 61575-70-0
 CMF C23 H27 N2

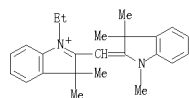


RN 866757-28-0 CAPLUS

L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CN 3H-Indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N1]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9CI) (CA INDEX NAME)

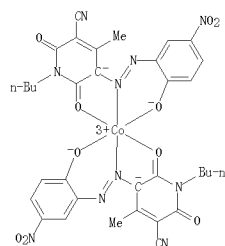
CM 1

CRN 866757-27-9
 CMF C24 H29 N2



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



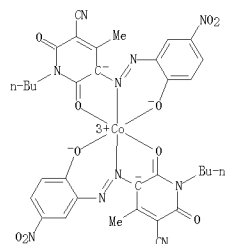
RN 866757-29-1 CAPLUS
 CN 3H-Indolium, 1-ethyl-2-[[[1-ethyl-3,3-dimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N1]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 802280-18-8
 CMF C25 H31 N2

L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CM 2

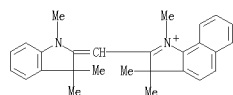
CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



RN 866757-35-9 CAPLUS
 CN 3H-Benz[e]indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N1]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9CI) (CA INDEX NAME)

CM 1

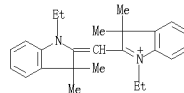
CRN 866757-34-8
 CMF C27 H29 N2



CM 2

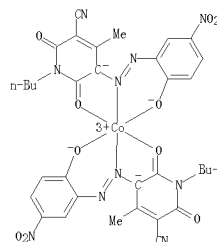
CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS

L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

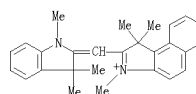
CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS



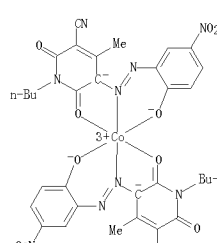
RN 866757-33-7 CAPLUS
 CN 1H-Benz[e]indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,1,3-trimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N1]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 866757-32-6
 CMF C27 H29 N2



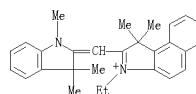
L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 866757-37-1 CAPLUS
 CN 1H-Benz[e]indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-ethyl-1,1-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N1]-4-methyl-2-oxo-6-(oxo- κ O)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9CI) (CA INDEX NAME)

CM 1

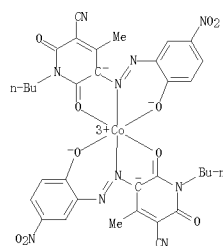
CRN 866757-36-0
 CMF C28 H31 N2



CM 2

CRN 330442-50-7
 CMF C34 H30 Co N10 O10
 CCI CCS

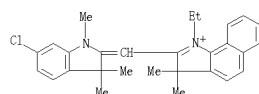
L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 866757-39-3 CAPLUS
 CN 3H-Benz[glindolium, 2-[(6-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-, bis[1-butyl-1,2,5,6-tetrahydro-5-[[2-(hydroxy-κO)-5-nitrophenyl]azo-κN1]-4-methyl-2-oxo-6-(oxo-κO)-3-pyridinecarbonitrilato(2-)]cobaltate(1-)] (9C1) (CA INDEX NAME)

CM 1

CRN 866757-38-2
 CNF C28 H30 C1 N2



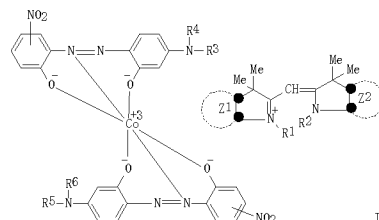
CM 2

CRN 330442-50-7
 CNF C34 H30 Co N10 O10
 CCI CCS

L4 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2005:1075866 CAPLUS
 DN 143:348676
 TI Light-resistant cyanine pigment
 IN Aizawa, Yasushi; Koyama, Yoshinori; Noguchi, Ayashi
 PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Japan
 SO PCT Int. Appl., 22 pp.
 CODEN: PIXXD2

DT Patent
 LA Japanese
 FAN. CNT 1

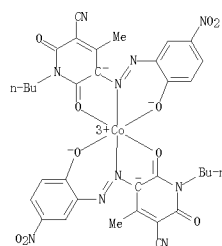
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005092988	A1	20051006	WO 2005-JP5191	20050323
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BS, BR, CA, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI JP 2004-91178	A	20040326		
OS MARPAT 143:348676				
GI				



AB A cyanine pigment I [Z1, Z2 = (un)substituted monocyclic aromatic ring; Z2 = monocyclic or fused polycyclic aromatic ring; R1, R2 = (un)substituted aliphatic hydrocarbyl] exhibits a main local maximum in the absorption spectrum thereof at a wave length longer than 400 nm, in the state of a liquid. The cyanine pigment absorbs a visible light having a short wave length, is excellent in the resistance to a light and the solubility to a solvent, and, also has thermal characteristics meeting requirements of new fields wherein organic pigment compds. are applied, which results in the expansion of the width of organic pigment compds. capable of being selected as a light absorbing material in the above-mentioned fields.

IT 866006-20-4P
 RL: IMP (Industrial manufacture); PREP (Preparation)
 (light-resistant short visible light-absorbing cyanine pigments)
 RN 866006-20-4 CAPLUS

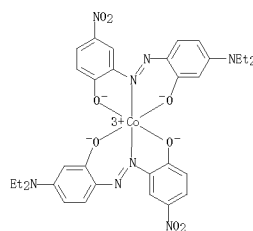
L4 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L4 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, bis[2-[[4-(diethylamino)-2-(hydroxy-κO)phenyl]azo-κN1]-4-nitrophenolato(2-)-κO)cobaltate(1-)] (9C1) (CA INDEX NAME)

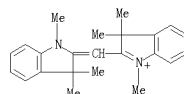
CM 1

CRN 221002-29-5
 CNF C32 H32 Co N8 O8
 CCI CCS



CM 2

CRN 61575-70-0
 CNF C23 H27 N2



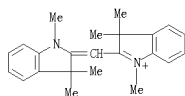
IT 103998-41-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (light-resistant short visible light-absorbing cyanine pigments)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CNF C23 H27 N2

L4 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN (Continued)



CM 2

CRN 14797-73-0
CMF C1 04RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMATL4 ANSWER 19 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN
AN 2005:979709 CAPLUS

DN 143:268290

TI Short visible light absorbing cyanine dyes with good light resistance and solubility

IN Aizawa, Yasushi; Koyama, Yoshinori; Noguchi, Avashi

PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Japan

S0 PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005083011	A1	20050909	WO 2005-JP2978	20050224
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BF, BG, BR, RU, TJ, TM, AT, BE, BS, CH, CI, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1734085	A1	20061220	EP 2005-710629	20050224
R: DE, GB				
CN 1934198	A	20070321	CN 2005-80008684	20050224
KR 2007015132	A	20070201	KR 2006-717173	20060825
IN 2006CN03552	A	20070622	IN 2006-CN3552	20060926
US 20080000034	A1	20080103	US 2007-590895	20070613
PRAI JP 2004-53528	A	20040227		
JP 2004-65296	A	20040308		
JP 2004-173653	A	20040611		
WO 2005-JP2978	W	20050224		

OS MARPAT 143:268290

AB Title cyanine dyes have a specific structure and exhibit the primary local maximum of absorption in the region of a wavelength ≥ 400 nm in the state of a solution. Thus, 2 g 2-[(1,3-dihydro-1,3,3-trimethyl-2H-2-ylidene)methyl]-1,3,3-trimethyl-3H-indolium perchlorate and 3.5 g triethylammonium bis[1-butyl-1,2-dihydro-6-(hydroxy- κ O)-5-[[2-(hydroxy- κ O)-5-nitrophenyl]azo- κ N]]-4-methyl-2-oxo-3-pyridinecarboxylate(2-)-cobaltate were refluxed for 20 min in 20 mL acetonitrile, removed solvent, ethanol was added therein and refluxed for 50 min to give a cyanine dye with absorption maximum 447 nm, good solubility in various solvents, decomposition temperature 245°, and good light resistance.

IT 103998-41-0 863962-11-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(short visible light absorbing cyanine dyes with good light resistance and solubility)

RN 103998-41-0 CAPLUS

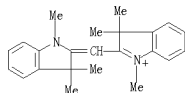
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2

L4 ANSWER 19 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN (Continued)



CM 2

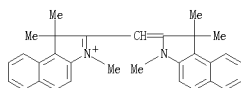
CRN 14797-73-0
CMF C1 04

RN 863962-11-2 CAPLUS
CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 157075-00-8

CMF C31 H31 N2



CM 2

CRN 14797-73-0
CMF C1 04RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 2005:428675 CAPLUS

DN 142:472665

TI Optical recording disk showing improved recording capacity

IN Shima, Takayuki; Kuwahara, Masashi; Tominaga, Junji; Fukuzawa, Shigetoshi;

PA Kobayashi, Tatsuhiro; Kikugawa, Takashi

S0 National Institute of Advanced Industrial Science and Technology, Japan;

S0 TDK Corporation

S0 Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JPKXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005129159	A	20050519	JP 2003-364093	20031024
PRAI JP 2003-364093		20031024		

AB The title optical recording disk includes an organic dye layer sandwiched between dielec. layers and an optical absorption layer sandwiched between dielec. layers. The organic dye is melted, sublimed, or decomposed upon laser beam irradiation to make recording marks. The organic dye is monomethine cyanine, porphyrin, or phthalocyanine, and the optical absorption layer contains Sb and/or Te.

IT 103998-41-0

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(organic dye layer in optical recording disk showing improved recording capacity)

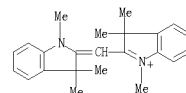
RN 103998-41-0 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

CMF C1 04



L4 ANSWER 21 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2005:96149 CAPLUS
 DN 142:207700
 TI Erasable optical disk having 20 GB-class recording layers
 IN Kamesaki, Hisamitsu
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 94 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005032353	A	20050203	JP 2003-195677	20030711
JP 2003-195677		20030711		

AB The optical disk contains ≥ 2 recording layers which are based on organic material and have absorbance 0.01-0.5 toward the laser wavelength used in recording and erasing. Preferably, the organic layers are laminated with transparent spacer layers alternately, topped with a reflective layer. Preferably, the organic materials contain organic substances with decomposition temperature 160-500°.

IT 103998-41-0

RL: TEM (Technical or engineered material use); USES (Uses)

(NK 3212: erasable optical disk having 20 GB-class recording layers)

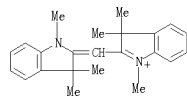
RN 103998-41-0 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

CMF C1 04



L4 ANSWER 22 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:472690 CAPLUS
 DN 141:44922
 TI Optical recording disk containing cerium-based dielectric material for improved reduction in cross talk and manufacture thereof using spin coating
 IN Fukuzawa, Shigetoshi
 PA TDK Corporation, Japan
 SO Jpn. Kokai Tokkyo Koho, 41 pp.
 CODEN: JKXXAF

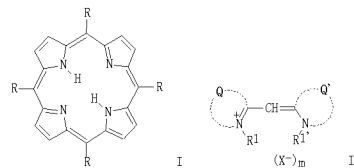
DT Patent
 LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004164716	A	20040610	JP 2002-327259	20021111
JP 2002-327259		20021111		

OS MARPAT 141:44922

GI



AB Disclosed is the optical recording disk comprising an organic compound-based recording layer, a dielec. layer, and a translucent layer in the order formed on a support, wherein the dielec. layer contains a cerium-based dielec. material such as cerium oxide and a mixt of cerium oxide and alumina. The organic compound may be based on porphyrin dye represented by I (R = benzene derivative) or a monomethinecyanine represented by II (Q, Q' = N-containing heterocyclyl; R1, R1' = alkyl; X- = anion; and m = 0, 1).

IT 103998-41-0

RL: DEV (Device component use); USES (Uses)

(optical recording disk containing cerium-based dielec. material for improved reduction in cross talk)

RN 103998-41-0 CAPLUS

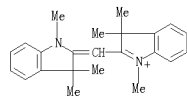
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2

L4 ANSWER 22 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 14797-73-0

CMF C1 04



L4 ANSWER 23 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:291672 CAPLUS
 DN 140:329617
 TI Rewritable optical recording medium for blue laser and manufacture thereof
 IN Kamesaki, Hisamitsu
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 71 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004111011	A	20040408	JP 2003-135745	20030514
JP 2002-143708	A	20020617		
JP 2002-215782	A	20020724		

OS MARPAT 140:329617

AB The rewritable optical recording medium comprises on a substrate a 1st light-absorbing layer mainly made from an organic material, a 2nd light absorbing layer mainly made from a metal material and/or an inorg. material, wherein both layers have absorbances ≤ 0.5 for an information regeneration wavelength of ≤ 500 nm.

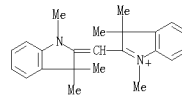
IT 36536-20-6, NIG3212 103998-41-0

RL: DEV (Device component use); USES (Uses)

(rewritable optical recording disk for blue laser)

RN 36536-20-6 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)



• I⁻

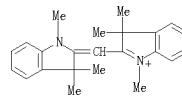
RN 103998-41-0 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

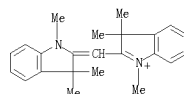
L4 ANSWER 23 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CRN 14797-73-0
 CMF C1 04



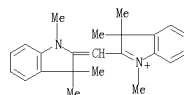
L4 ANSWER 24 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:250391 CAPLUS
 DN 140:294869
 TI Write-once read-many optical disk having more than three organic layers and method for manufacture thereof by spin coating process
 IN Kanesaki, Hisamitsu
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 27 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004095142	A	20040325	JP 2003-173097	20030618
PRAI JP 2002-177173	A	20020618		
AB				
IT				
RN				
CN				

The title optical disk has ≥3 adjacent organic material layers on a substrate, wherein at least two layers are used as recording layers. The optical disk can be used with about 405 nm laser beam and is manufactured efficiently in low cost.
 36536-20-6, NK 3212 103998-41-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical disk having more than three organic layers and method for manufacture thereof)
 36536-20-6 CAPLUS
 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)



RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2



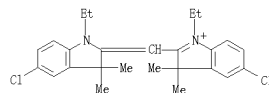
L4 ANSWER 24 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CM 2
 CRN 14797-73-0
 CMF C1 04



L4 ANSWER 25 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:250242 CAPLUS
 DN 140:294776
 TI Photopolymerizable composition for presensitized lithographic plate and its processing method
 IN Kuroki, Takaaki; Suzuki, Kazuyoshi
 PA Konica Minolta Holdings Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 64 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

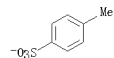
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004093591	A	20040325	JP 2002-250502	20020829
PRAI JP 2002-250502		20020829		
OS				
AB				
IT				
RN				
CN				

The title photopolymerizable composition comprises a borate compound represented by R1R2R3R4B-Z+ (R1-4 = alkyl, aryl, aralkyl, alkenyl, alkynyl, silyl, heterocyclyl, halo; Z+ = cation), a cationic dye, and ethylenic unsatd. group-containing compds., wherein 10-90 % of the ethylenic unsatd. group-containing compds. have a weight average mol. weight of 15,000-200,000 and an acid value of 30-200 mg/KOH. The lithog. plate, prepared from the above composition, shows excellent sensitivity, storage stability, and printability.
 675818-42-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photopolymerizable composition for presensitized lithog. plate and its processing method)
 675818-42-5 CAPLUS
 3H-Indolium, 5-chloro-2-[(5-chloro-1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)
 CM 1
 CRN 675818-41-4
 CMF C25 H29 Cl2 N2



CM 2

CRN 16722-51-3
 CMF C7 H7 O3 S



L4 ANSWER 26 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:203528 CAPLUS
 DN 140:243660
 TI Optical recording medium and optical recording/reproducing method
 IN Fukuzawa, Narutoshi
 PA TDK Corporation Japan
 SO U.S. Pat. Appl. Publ., 11 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20040047282	A1	20040311	US 2003-657244	20030909
JP 2004098541	A	20040402	JP 2002-264972	20020911
TW 227459	B	20050201	TW 2003-92124808	20030909

FRAI JP 2002-264972 A 20020911
 AB The present invention provides an optical recording medium that includes a recording layer composed mainly of an organic compound and can utilize blue-violet semiconductor laser light (390 to 420 nm in wavelength) as recording/reproducing laser light. The present invention also provides an optical recording/reproducing method using the optical recording medium. The optical recording medium 1 comprises at least a supporting substrate 2; a recording layer 3 on the supporting substrate 2; the recording layer 3 containing an organic compound as a major component; and a light-transmitting layer 5 on the recording layer 3, the light-transmitting layer 5 being capable of transmitting laser light with a wavelength of 390 to 420 nm for recording and reproducing information. The organic compound in the recording layer 3 includes a monomethine cyanine dye that has the min. value n min of its refractive index n (real part of the complex refractive index) within the range of 370 to 425 nm and has a refractive index n of 1.2 or lower with respect to the wavelength of the recording/reproducing laser light. The organic compound, when absorbing the laser light, melts or degrades to bring about a change in the refractive index, thereby effecting recording of the information.

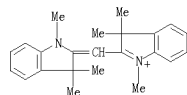
IT 103998-41-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical recording medium and optical recording-reproducing method)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

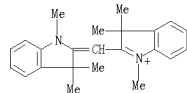
L4 ANSWER 27 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:200942 CAPLUS
 DN 140:261473
 TI Recordable optical disks capable of being recorded at blue laser wavelength region, and their preparation
 IN Kamesaki, Hisamitsu
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 32 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004079154	A	20040311	JP 2003-175057	20030619
JP 4093926	B3	20080604		

FRAI JP 2002-180555 A 20020620
 AB The optical disk comprises a dye-containing light-absorbing layer with 5-200 nm thickness, and first- and second layers sandwiching the light-absorbing layer, wherein the first- and second layers contain a metal and/or inorg. substance. Preferably, the optical disk employs a combination of materials showing 3-30 times difference in thermal conductivity for the first- and second layers, in which the heat required for the recording can be controlled by selecting the first- and second layers. In preparation of the optical disk having the first- and second layers which contain Te, O, and/or N, and optionally other metals, sputter deposition is carried out either by introducing O and/or N or by intaking O and/or N in air.

IT 36536-20-6, NK 3212 103998-41-0
 RL: DEV (Device component use); USES (Uses)
 (dye; preparation of recordable optical disks having dye-containing layer sandwiched between metallic or inorg. layers)

RN 36536-20-6 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)



● I⁻

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

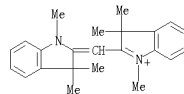
CRN 61575-70-0

CMF C23 H27 N2

L4 ANSWER 26 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CMF Cl 04



L4 ANSWER 27 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



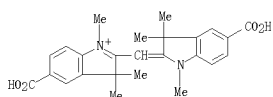
CM 2

CRN 14797-73-0

CMF Cl 04



L4 ANSWER 28 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2003:724569 CAPLUS
 DN 140:44628
 TI Efficient sensitization of nanocrystalline TiO₂ films with cyanine and merocyanine organic dyes
 AU Sayama, Kazuhiro; Tsukagoshi, Shingo; Mori, Tohru; Hara, Kohjiro; Ohga, Yasuyo; Shinpou, Akira; Abe, Yoshimoto; Suga, Sadaharu; Arakawa, Hironori
 CS Photoreaction Control Research Center (PCRC), National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8665, Japan
 SO Solar Energy Materials and Solar Cells (2003), 80(1), 47-71
 CODEN: SEMCQ; ISSN: 0927-0248
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB Various kinds of cyanine and merocyanine organic dyes having short anchoring groups as sensitizers on nanocryst. TiO₂ electrodes were studied to promote the short-circuit photocurrent (J_{sc}) and the solar light-to-power conversion efficiency (η_{sun}). The J_{sc} and η_{sun} improved when the three different three dyes (yellow and red cyanine dyes, and blue squarilium cyanine dye) were adsorbed simultaneously on a TiO₂ electrode, as compared with the J_{sc} and η_{sun} of the TiO₂ electrodes adsorbed by each single dye. The maximum η_{sun} was 3.1% (AM-1.5, 100 mW/cm²). The J_{sc} and η_{sun} were influenced by the solvents for the dye adsorption on the TiO₂ electrode, and the efficiencies were improved by the addition of some cholic acids into the dye solution for adsorption. The electron transfer and/or the energy transfer from the red cyanine dye to the blue cyanine dye was observed on a SiO₂ film using emission spectroscopy, suggesting a strong interaction between two dyes. The J-like aggregates of the blue cyanine dyes hardly showed sensitization efficiency.
 IT 637042-99-0
 RL: DEV (Device component use); PRP (Properties); USES (Uses) (scheme 1a, Cy0, adsorbed onto TiO₂; efficient sensitization of nanocryst. TiO₂ films with cyanine and merocyanine organic dyes and dye mixts.)
 RN 637042-99-0 CAPLUS
 CN 3H-Indolium, 5-carboxy-2-[(5-carboxy-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 332951-16-3
 CMF C25 H27 N2 O4

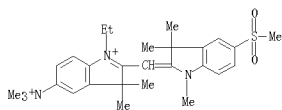


CM 2
 CRN 14797-73-0
 CMF C1 O4

L4 ANSWER 29 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2002:609715 CAPLUS
 DN 137:177097
 TI Photopolymerizable composition containing organic borate photopolymerization initiator for photoimaging recording material
 AU Takashima, Masanobu; Fukushima, Yuichi; Hanasaki, Kyoko
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 49 pp.
 CODEN: JKKXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002229197	A	20020814	JP 2001-25901	20010201
JP 4173645	B2	20081029		
JP 2001-25901		20010201		

 OS MARPAT 137:177097
 AB The photopolymerizable composition comprises a polymerizable compound having an ethylenic unsatd. bond and a dye represented by D-[L-R]m (D = cationic dye residue, monionic dye residue; L = divalent bonding group, single bond; R = R1R2R3N⁺X⁻, R4R5⁺X⁻, R6⁺TRSF⁺X⁻; R1-3 = aliphatic, aromatic, B and m = integer greater than 1). The dye may include cyanines, hemicyanines, merocyanines, hemioxonols, and coumarins. The photopolym. initiator is an organic borate represented by R1R1R2R13R14B- G⁺ (R11-14 = aliphatic, aromatic, heterocyclyl, etc.; and G⁺ = cation). Also claimed is a recording material comprising a color-forming component (A) encapsulated in a microcapsule and a color-forming component (B) which contains the polymerizable compound and is reactive with (A). The photopolymerizable composition showed high sensitivity not only to UV light but also to light ranging from visible to IR light.
 IT 446263-37-2
 RL: TEM (Technical or engineered material use); USES (Uses) (dye; Photopolymerizable composition containing dye and organic borate photopolym. initiator for photoimaging recording material)
 RN 446263-37-2 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-5-(methylsulfonyl)-2H-indol-2-ylidene)methyl]-1-ethyl-3,3-dimethyl-5-(trimethylammonio)-, iodide (1:2) (CA INDEX NAME)

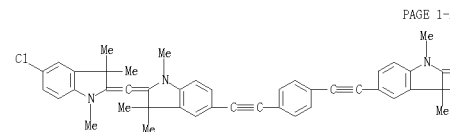


● 2 I⁻

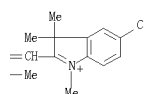
L4 ANSWER 28 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

 RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 30 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2002:439764 CAPLUS
 DN 137:232298
 TI Mass spectrometry of oligomeric cyanines and squaraines of the indole series: fast atom bombardment-induced chemical reactions
 AU Daelcke, Thomas; Grah, Walter; Johannes, Hans-Hermann; Lawrentz, Ulf; Rittner, Miriam; Schiebel, Hans-Martin; Schulze, Peter
 CS Inst. Organische Chemie, Univ. Bremen, Bremen, D-28359, Germany
 SO Zeitschrift fuer Naturforschung, B: Chemical Sciences (2002), 57(4), 335-336
 CODEN: ZNBSEN; ISSN: 0932-0776
 PB Verlag der Zeitschrift fuer Naturforschung
 DT Journal
 LA English
 AB Fast atom bombardment (FAB) has been used for mass spectrometric characterization of oligomeric cyanines and squaraines of the indole series which are linked by different aromatic spacers. Markedly different results were obtained for the oligomers and for the corresponding monomers. In addition to the expected mono-anions and mono-cations, ions of high relative abundance were detected which can only be explained on the basis of FAB-induced chemical reactions of the initial oligomers. Formation of allenyl, hydrogenation and dehydrogenation, resp., is characteristic for this class of compds. under FAB-conditions.
 IT 458557-83-0
 RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
 RN 458557-83-0 CAPLUS
 CN 3H-Indolium, 5-chloro-2-[[5-[2-[4-[2-[2-[5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methylene]-2,5-dihydro-1,3,3-trimethyl-1H-indol-5-yl]ethynyl]phenylethynyl]-1,5-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 458557-82-9
 CMF C56 H53 Cl2 N4



PAGE 1-A



PAGE 1-B

LA ANSWER 30 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
CM 2

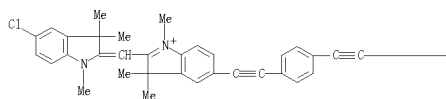
CRN 14797-73-0
CMF C1 04



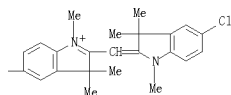
IT 458557-81-8
RL: GPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(mass spectrometry of oligomeric cyanines and squaraines of the indole series)
RN 458557-81-8 CAPLUS
CN 3H-Indolium, 5,5'-(1,4-phenylenedi-2,1-ethynediyl)bis[2-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, diperchlorate (9CI) (CA INDEX NAME)

CM 1
CRN 458557-80-7
CMF C56 H54 C12 N4

PAGE 1-A



PAGE 1-B



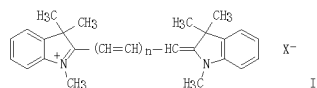
CM 2
CRN 14797-73-0
CMF C1 04

LA ANSWER 31 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:407034 CAPLUS
DI 136:410023
TI Copper electroplating baths and method for manufacturing semiconductor integrated circuits with no voids and seams by damascene method using them
IN Hashiba, Toshio; Itabashi, Takeyuki; Akaboshi, Haruo; Fukada, Shinichi
PA Hitachi Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002155390	A	20020531	JP 2000-349060	20001116
JP 3967879	B3	20070829		
US 20020084191	A1	20020704	US 2001-888642	20010626
US 20050087447	A1	20050428	US 2004-996382	20041126
PRAI JP 2000-349060	A	20001116		
US 2001-888642	A1	20010626		

GI

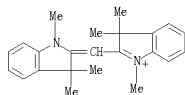


AB The bath contains Cu ion, an electrolyte, and a cyanine dye, an indolium compound, or I (X- = anion; n = 0-3). The method gives an IC with good electromigration resistance.

IT 103998-41-0, 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate
RL: NUU (Other use, unclassified); USES (Uses)
(electroplating bath containing; manufacture of IC with good electromigration resistance by damascene method using Cu electroplating baths containing cyanine dyes)

RN 103998-41-0 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1
CRN 61575-70-0
CMF C23 H27 N2



CM 2
CRN 14797-73-0
CMF C1 04

LA ANSWER 30 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

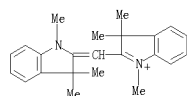


RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT



LA ANSWER 31 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2001:886235 CAPLUS
 DN 137:34447
 TI Nonlinear optical properties of specific polymethines: Influence of substituents and chain length
 AU Feldner, Andreas; Scherer, Dieter; Welscher, Markus; Vogtmann, Thomas; Schwoerer, Markus; Lawrentz, Ulf; Laue, Thomas; Johannes, Hans-Hermann; Grahn, Walter
 CS Lehrstuhl für Experimentalphysik II and Bayreuther Institut für Makromolekulforschung, Universität Bayreuth, Bayreuth, D-96440, Germany
 SO MCLG S&T, Section B: Nonlinear Optics (2000), 26(1-3), 99-106
 CODEN: MCLGEB; ISSN: 1068-7288
 PB Gordon & Breach Science Publishers
 DT Journal
 LA English
 AB The nonlinear optical response of conjugated π electron systems of dye oligomers, including cyanines, rigid merocyanines, and squaraines were studied. The third-order nonlinear optical susceptibility (χ^3) of dye solns. was studied using THG [third harmonic generation], DFM [degenerate four-wave mixing], and pump-probe expts. The mol. hyperpolarizability was obtained from variations of χ^3 with concentration. The two-photon absorption was determined from two-photon fluorescence data. Time-resolved measurements did not show any broadening of the third-order autocorrelation. The energy level and optical absorption cross-sections of two-photon excited states were also obtained from two-photon fluorescence data.
 IT 61575-71-1 436158-86-0 436158-88-2
 436158-90-6 436158-92-8 436158-94-0
 436158-96-2 436158-98-4 436159-00-1
 RL: PRP (Properties)
 (effects of substituent and chain length on nonlinear optical properties of conjugated cyanine and merocyanine and squaraine polymethines)
 RN 61575-71-1 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2

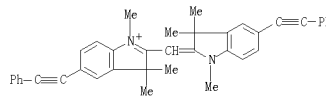


CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 436158-86-0 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-5-(2-phenylethynyl)-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-5-(2-phenylethynyl)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 436158-85-9
 CMF C39 H35 N2

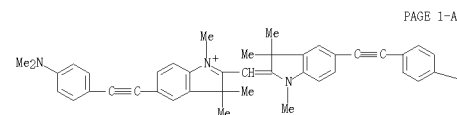


CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



RN 436158-88-2 CAPLUS
 CN 3H-Indolium, 5-[2-[4-(dimethylamino)phenyl]ethynyl]-2-[[5-[2-[4-(dimethylamino)phenyl]ethynyl]-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 436158-87-1
 CMF C43 H45 N4

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



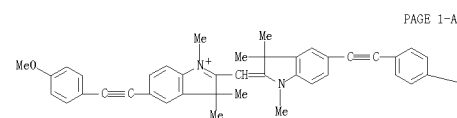
PAGE 1-B

~NMe2

CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



RN 436158-90-6 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-5-[2-(4-methoxyphenyl)ethynyl]-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-5-[2-(4-methoxyphenyl)ethynyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 436158-89-3
 CMF C41 H39 N2 O2



PAGE 1-B

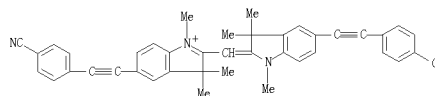
~OMe

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



RN 436158-92-8 CAPLUS
 CN 3H-Indolium, 5-[2-(4-cyanophenyl)ethynyl]-2-[[5-[2-(4-cyanophenyl)ethynyl]-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 436158-91-7
 CMF C41 H33 N4

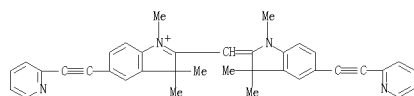


CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



RN 436158-94-0 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-5-[2-(2-pyridinyl)ethynyl]-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-5-[2-(2-pyridinyl)ethynyl]-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 436158-93-9
 CMF C37 H33 N4

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 436158-96-2 CAPLUS

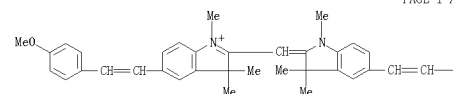
CN 3H-Indolium, 2-[[[1,3-dihydro-5-[2-(4-methoxyphenyl)ethenyl]-1,3,3-trimethyl-2H-indol-2-ylidene]methyl]-5-[2-(4-methoxyphenyl)ethenyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 436158-95-1

CMF C41 H43 N2 O2

PAGE 1-A



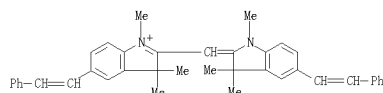
PAGE 1-B



CM 2

CRN 14874-70-5

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 14874-70-5

CMF B F4

CCI CCS

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CMF B F4

CCI CCS



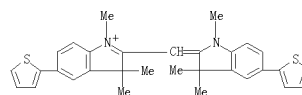
RN 436158-96-4 CAPLUS

CN 3H-Indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-5-(2-thienyl)-2H-indol-2-ylidene]methyl]-1,3,3-trimethyl-5-(2-thienyl)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 436158-97-3

CMF C31 H31 N2 S2



CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 436159-00-1 CAPLUS

CN 3H-Indolium, 2-[[[1,3-dihydro-1,3,3-trimethyl-5-(2-phenylethenyl)-2H-indol-2-ylidene]methyl]-1,3,3-trimethyl-5-(2-phenylethenyl)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 436158-99-5

CMF C39 H39 N2

L4 ANSWER 33 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:774950 CAPLUS

DN 136:71252

TI Ab initio (CASPT2) excited state calculations, including circular

dichroism, of helically twisted cyanine dyes

AU Schreiber, Marko; Vahrenhorst, Rainer; Buss, Volker; Fulscher, Markus P.

CS Institut für Physikalische und Theoretische Chemie,

Gerhard-Mercator-Universität, Duisburg, D-46047, Germany

SO Chirality (2001), 13(3), 571-576

CODEN: CHIRLEP; ISSN: 0898-0042

PB Wiley-Liss, Inc.

DT Journal

LA English

AB Ab initio calcs. at the CASSCF/CASPT2 level were performed on helically twisted mono-, tri-, and pentamethine cyanine dyes in the all-2⁺ configurations. Excitation energies and oscillator and rotatory strengths were calculated for the five lowest energy singlet states. Both the long wavelength methine band and the cis-band could be identified unambiguously from their configurational parentage. The calculated state energies are within 0.09 eV of the exptl. value for the methine band and within 0.16 eV for the cis-band. The calculated rotatory strengths of the methine band shows sign inversion as the length of the chromophore increases: neg. for the short monomethine, strongly pos. for the pentamethine. The trimethine presents a borderline case: the measured rotatory strength is almost nil, the calculated one depends on the geometry. There is good agreement between rotatory strengths calculated in the velocity and in the length formalism.

IT RL: FRP (Properties); TEM (Technical or engineered material use); USES

(Uses)

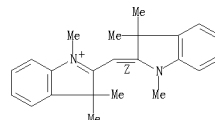
(dye; ab initio excited state calcs., including CD, of helically

twisted cyanine dyes)

RN 59651-99-9 CAPLUS

CN 3H-Indolium, 2-[(Z)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)

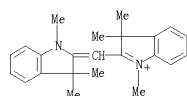
Double bond geometry as shown.

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 34 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2001:691725 CAPLUS
 DN 135:247006
 TI Hair dye composition comprising a direct dye
 IN Matsunaga, Kenichi; Miyabe, Hajime; Ohashi, Yukihiko; Totoki, Shintaro;
 Saito, Yoshinori
 PA Kao Corporation, Japan
 SO Eur. Pat. Appl., 22 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN CNT 1

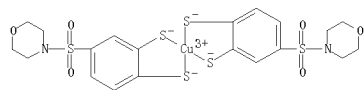
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1133978	A2	20010919	EP 2001-106358	20010316
EP 1133978	A3	20020327		
EP 1133978	B1	20061019		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6547834	B1	20030415	US 2001-808354	20010315
JP 2002080332	A	20020319	JP 2001-76599	20010316
PRAI JP 2000-76636	A	20000317		
JP 2000-136185	A	20000627		
OS MARPAT 135:247006				

AB Provide is a hair dye composition containing a direct dye (Markush structures given). This hair dye composition has markedly high hair dyeing power, has less color fade over time and undergoes a smaller change in the color tone of the dye after storage. A hair dye composition contained dimethoxyanilinyliethenyltrimethylindolium chloride 0.5, monoethanolamine 1, ethanol 15, propylene glycol 10, polyoxyethylene octyldodecyl ether 10, polyoxyethylene (9) tridecyl ether 3, polyoxyethylene (3) tridecyl ether 6, diethanolamide oleate 8, cleyl alc. 2, ammonium chloride q.s., and water q.s. 100%, pH = 9.
 IT 6359-44-0
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (hair dye composition comprising direct dye)
 RN 6359-44-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

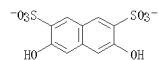
L4 ANSWER 35 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CCI CCS



RN 355020-37-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, salt with 3,6-dihydroxy-2,7-naphthalenedisulfonic acid (2:1) (9CI) (CA INDEX NAME)

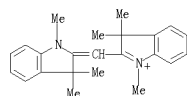
CM 1

CRN 153340-59-1
 CMF C10 H6 O8 S2



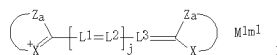
CM 2

CRN 61575-70-0
 CMF C23 H27 N2



L4 ANSWER 35 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2001:624070 CAPLUS
 DN 135:187779
 TI Material and method for optical recording
 IN Morishima, Shinichi; Usami, Yoshihisa; Komori, Noboru
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKKXAF
 DT Patent
 LA Japanese
 FAN CNT 1

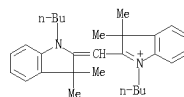
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001232945	A	20010828	JP 2000-48504	20000225
PRAI JP 2000-48504		20000225		
OS MARPAT 135:187779				
GI				



AB The title material has a recording layer on a substrate containing I (X = O, S, NR; R = alkyl, aryl, heterocyclyl; Za = group of atoms forming 5- or 6-membered ring; L1-3 = methine; M1 = counter ion; j = 0, 1; ml = 0-10 needed for neutralizing the mol.). The process uses light <550 nm for recording. However, when the J displays 1, aforementioned complex ring does not form the India renin nucleus.
 IT 355020-36-9 355020-37-0
 RL: DEV (Device component use); USES (Uses)
 (methine dye contained in optical recording material)
 RN 355020-36-9 CAPLUS
 CN 3H-Indolium, 1-butyl-2-[(1-butyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl-, bis[4-[[3,4-di(mercapto- κ S)phenyl]sulfonyl]morpholinato (2-)]cuprate (1-) (9CI) (CA INDEX NAME)

CM 1

CRN 355020-35-8
 CMF C29 H39 N2

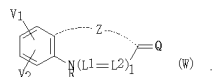


CM 2

CRN 197007-75-3
 CMF C20 H22 Cu N2 O6 S6

L4 ANSWER 36 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2001:117407 CAPLUS
 DN 134:181043
 TI Photoelectric converters and photoelectrochemical cells
 IN Watanabe, Tetsuya; Tsukahara, Jiro
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKKXAF
 DT Patent
 LA Japanese
 FAN CNT 1

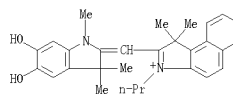
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001043906	A	20010216	JP 1999-214045	19990728
PRAI JP 1999-214045		19990728		
OS MARPAT 134:181043				
GI				



AB The photoelec. converters use semiconductor particles sensitized by a methine dye, having acidic group substituents on 2 neighboring C atoms. The dye is selected from cyanine, merocyanine, and oxonol dyes; especially I, where L1 and L2 = (substituted) methine groups, 1 = 0 or 1, Z = non-metal atoms forming a N containing heterocyclic ring. R = (substituted)alkyl or aryl group, Q = methine or polymethine groups necessary to form the dye, V1 and V2 = same or different acidic group attached to neighboring C atoms, and W = counter ions for elec. balance of the mol. The semiconductor particles are TiO2 particles.

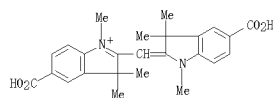
IT 325728-13-0
 RL: MOD (Modifier or additive use); USES (Uses)
 (methine dye sensitized titania semiconductor particles for photoelectrochem. cells)

RN 325728-13-0 CAPLUS
 CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-5,6-dihydroxy-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,1-dimethyl-3-propyl-, iodide (1:1) (CA INDEX NAME)



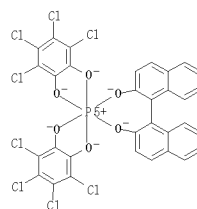
● I⁻

L4 ANSWER 37 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2001:85179 CAPLUS
 DN 134:283186
 TI Significant effects of the distance between the cyanine dye skeleton and the semiconductor surface on the photoelectrochemical properties of dye-sensitized porous semiconductor electrodes
 AU Sayama, Kazuhiro; Hara, Kohjiro; Ohga, Yasuyo; Shinpou, Akira; Suga, Sadaharu; Arakawa, Hironori
 CS National Institute of Materials and Chemical Research (NIMC), Tsukuba, Ibaraki, 350-8565, Japan
 SO New Journal of Chemistry (2001), 25 (2), 200-202
 CODEN: NJCHES; ISSN: 1144-0546
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB The incident photon-to-current conversion efficiency (IPCE) of a porous TiO₂ electrode sensitized by cyanine dyes increased with decreasing distance between the skeleton of the dye and the TiO₂ surface. The photocurrent of oxide semiconductor electrodes sensitized by a cyanine dye increased with the pos. shift of the conduction band potential of the oxide semiconductor in the following order: Nb₂O₅<TiO₂<ZnO<SnO₂. The SnO₂ semiconductor cell showed the best light-to-elec. conversion efficiency among the four semiconductors.
 IT 332951-16-3
 RL: DEV (Device component use); USES (Uses)
 (effects of the distance between the cyanine dye skeleton and the semiconductor surface on incident photon-to-current conversion efficiency)
 RN 332951-16-3 CAPLUS
 CN 3H-Indolium, 5-carboxy-2-[(5-carboxy-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)



RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

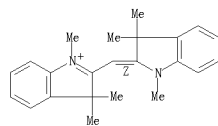
L4 ANSWER 38 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2000:820357 CAPLUS
 DN 134:117122
 TI Configurational ordering of cationic chiral dyes using a novel C₂-symmetric hexacoordinated phosphate anion
 AU Lacour, Jerome; Londez, Anne; Goujon-Ginglinger, Catherine; Buss, Volker; Bernardinelli, Gerald
 CS Departement de Chimie Organique, Universite de Geneve, Geneva, CH-1211, Switz.
 SO Organic Letters (2000), 2 (26), 4185-4188
 CODEN: ORLEP7; ISSN: 1523-7060
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 134:117122
 AB C₂-Symmetry hexacoordinated phosphorus BINPHAT anion-of configuration controlled by a BINOL ligand-can be prepared readily in a one-pot process and behaves as an efficient NMR chiral shift agent and chiral inducer onto monomethinium dyes (CD, 1H NMR).
 IT 320747-66-8P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (dye; preparation and CD spectra of chiral monomethinium dyes)
 RN 320747-66-8 CAPLUS
 CN 3H-Indolium, 2-[(Z)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, (OC-6-21-A)-[(1R)-[1,1'-binaphthalene]-2,2'-diolato(2-)-κO, κO']bis[3,4,5,6-tetrachloro-1,2-benzenediolato(2-)-κO, κO']phosphate(1-) (9CI) (CA INDEX NAME)
 CM 1
 CRN 320747-59-9
 CMF C32 H12 Cl8 O6 P
 CCI CCS



CM 2
 CRN 59651-99-9
 CMF C23 H27 N2

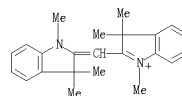
Double bond geometry as shown.

L4 ANSWER 38 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



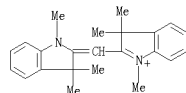
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 39 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2000:550962 CAPLUS
 DN 134:117121
 TI Ab initio molecular-dynamics simulations of adsorption of dye molecules at surfaces
 AU Sugihara, M.; Meyer, H.; Entel, P.; Sakamoto, Y.; Hafner, J.; Buss, V.
 CS Theoretische Tieftemperaturphysik, Universitat Duisburg, Duisburg, 47048, Germany
 SO Structure and Dynamics of Heterogeneous Systems: From Atoms, Molecules and Clusters in Complex Environment to Thin Films and Multilayers, International Symposium, Duisburg, Germany, Feb. 24-26, 1999 (2000), Meeting Date 1999, 36-43. Editor(s): Entel, Peter; Wolf, Dietrich E. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore.
 CODEN: 69AG0Z
 DT Conference
 LA English
 AB We present results of ab initio total energy calcs. and mol.-dynamics simulations of dye mols. on the NaCl(100) surface. The investigations concentrate on the flat dye mols. 3,3'-dimethyloxycarbocyanine, [C₁₉H₁₇N₂O₂]⁺, which form sandwich-like structures if closely packed, and the cyanine mol. bis(1,3,3-trimethyl-2-indolyl)monomethinium, [C₂₈H₂₃N₂]⁺, which shows a typical stereochem. deformation due to two repulsive Me groups. The mol.-dynamics simulations are able to reproduce the exptl. observed configurations of the charged dye mols. on surfaces.
 IT 61575-70-0
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); FROC (Process)
 (ab initio mol.-dynamics simulations of adsorption of cyanine dyes on salt)
 RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)



RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 40 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2000:550960 CAPLUS
 DN 133:281361
 TI Molecules in ground and excited states - ab initio molecular dynamics as a computational tool in chemistry
 AU Falzowski, S.; Buss, V.
 CS Institut für Physikalische und Theoretische Chemie, Gerhard-Mercator-Universität, Duisburg, D 47048, Germany
 SO Structure and Dynamics of Heterogeneous Systems: From Atoms, Molecules and Clusters in Complex Environment to Thin Films and Multilayers, International Symposium, Duisburg, Germany, Feb. 24-26, 1999 (2000), Meeting Date 1999, 17-25. Editor(s): Entel, Peter; Wolf, Dietrich E. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore.
 CODEN: 69AG0Z
 DT Conference
 LA English
 AB The results of 2 ab initio mol. dynamics (AIMD) simulations of medium-sized organic moles. are described, 1 in the (electronic) ground state and the other in the excited state. Gradients obtained from non-empirical calcn. of the electronic wave function are used to drive the motions of the nuclei by a numerical 1st-order approximation of Newton's equations. In the 1st simulation, the relaxation of a monomethine dye from the planar transition state to the helically twisted min.-energy geometry is studied, a reaction which involves only the electronic ground state of the mol. In the 2nd example, the isomerization about the central double bond of the 3,5-pentadien-1-iminium mol. ion was followed in an electronically excited state, a reaction which serves as a model for the initial step in the visual process of the vertebrate eye. Both simulations yield reaction trajectories that agree with classical expectations and with results previously obtained by others.
 IT 61575-70-0
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (ab initio mol. dynamics as a computational tool in chemical of moles. in ground and excited states)
 RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)



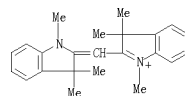
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 41 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 41 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1999:792392 CAPLUS
 DN 132:144348
 TI Optical and thermal properties of a cyanine dye medium for next-generation DVD-Rs
 AU Sun, S.; Chen, P.; Zhou, S.; Qian, Z.; Zheng, D.; Tsuneki, O.; Masaaki, H.
 CS Institute of Photographic Chemistry, The Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China
 SO Imaging Science Journal (1999), 47(2), 113-117
 CODEN: ISCIJPK; ISSN: 1368-2199
 FE Royal Photographic Society of Great Britain
 DT Journal
 LA English
 AB A dye material for the next generation of digital versatile disk-recordables (high-definition DVD-Rs) is required to absorb at a shorter wavelength compared with conventional dye media. For this purpose, 1,3,3,1,3',3'-hexamethyl-2,2'-indocyanine perchlorate (D-1), whose maximum absorption band exists at 434.6 nm, was selected. Reflection and transmission spectra of D-1 thin films were studied. Oscillation of the reflectance and transmittance around 480 nm with film thickness can be seen. The calculated complex refractive index is 2.15 + i0.085. Its decomposition temperature was measured to be around 282°C and no m.p. was observed in its differential scanning calorimeter (DSC) curve. The optical and thermal properties of D-1 and longer wavelength-absorbing indocyanine dyes were also compared.
 IT 103998-41-0
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (optical and thermal properties of cyanine dye for next-generation recordable digital versatile disk)
 RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2

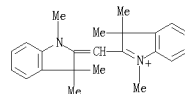


CM 2
 CRN 14797-73-0
 CMF C1 04

L4 ANSWER 42 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1999:460320 CAPLUS
 DN 131:108979
 TI Multicolor image-forming material
 IN Tsuda, Masashi
 PA Brother Kogyo Kabushiki Kaisha, Japan
 SO Eur. Pat. Appl., 37 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 930539	A1	19990721	EP 1999-300278	19990115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, NO				
JP 11202484	A	19990730	JP 1998-20303	19980116
US 6342329	B1	20020129	US 1999-228762	19990112
PRAI JP 1998-20303	A	19980116		

AB A multicolor image-forming material comprises a substrate and a plurality of microcapsules comprising colorless dye precursors and photocuring compns. with sensitivity peaks in different wavelength regions. Each of the photocuring compns. contains a spectral sensitizer which is designed so that there is apparently no crosstalk in an image which is formed using the image-forming material.
 IT 103998-41-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (multicolor photoimaging materials with microcapsules containing photocuring color-forming compns. containing)
 RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2



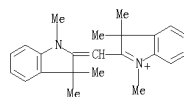
CM 2
 CRN 14797-73-0
 CMF C1 04



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 42 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 43 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1999:299644 CAPLUS
 DN 131:60010
 TI Structure and dynamics of helically twisted cyanine dyes
 AU Falzewski, Stephani; Terstegen, Frank; Buss, Volker
 CS Institut für Physikalische und Theoretische Chemie,
 Gerhard-Mercator-Universität Duisburg, Duisburg, D-47048, Germany
 SO Chemical Physics (1999), 243(1-2), 179-188
 CODEN: CMPH22; ISSN: 0301-0104
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB Optimized geometries of two helically twisted C2-sym. monomethine dyes and of two trimethine dyes have been obtained at the RHF/6-31G** and (for the monomethine dyes) the B3LYP/6-31G** level. The nonplanar deformation of the chromophore is reproduced quant. by the calcs. Chiral substitution of the dyes renders oppositely twisted conformations diastereomeric. The calculated energy difference between the diastereomers is in satisfactory agreement with the exptl. data where available and is found to be hyperconjugative in nature. The inversion of one of the monomethine dyes involves a planar transition state. The relaxation from there is followed by ab initio mol. dynamics.
 IT 61575-71-1
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (monomethine dye; structure and dynamics of helically twisted mono- and trimethine dyes)
 RN 61575-71-1 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2



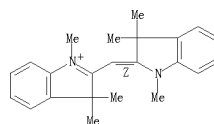
CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



L4 ANSWER 43 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 44 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1999:35815 CAPLUS
 DN 130:197881
 TI Hyperconjugation discriminates between helically twisted cyanine dyes
 AU Buss, Volker; Falzewski, Stephani; Kolster, Klaus
 CS Institut fuer Physikalische und Theoretische Chemie, Universitaet
 Duisburg, Duisburg, D47048, Germany
 SO Journal of Organic Chemistry (1999), 64(3), 1071-1073
 CODEN: JOCEAH; ISSN: 0022-3263
 PB American Chemical Society
 DT Journal
 LA English
 GI
 AB The authors present exptl. (NMR) and theor. evidence that the charges in cyanine dyes can be shifted, via non-bonding resonance forms, into saturated positions in the mol. Hyperconjugation is responsible for chiral discrimination observed in the twisted indocyanine dyes I (R1 = Me, R2 = Pr) and II (R1 = Me, R2 = Pr). Bond lengths and dihedral angles were compared with those in I (R1 = R2 = Me) and II (R1 = R2 = Me).
 IT 59652-00-5
 RL: PRP (Properties)
 (hyperconjugation in helically twisted indocyanine dyes)
 RN 59652-00-5 CAPLUS
 CN 3H-Indolium, 2-[(Z)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)
 CM 1
 CRN 59651-99-9
 CMF C23 H27 N2

Double bond geometry as shown.



CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS

L4 ANSWER 44 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 45 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1998:90440 CAPLUS

DN 128:166989

OREF 128:32909a,32912a

TI Simple ion exchange procedure of common anions to TRISPHAT. Application to

the purification of cationic species

AU Lacour, Jerome; Barchechath, Sylvie; Jodry, Jonanthan J.; Ginglinger, Catherine

CS Departement de Chimie Organique, Universite de Geneve, Geneva, CH-1211, Switz.

SO Tetrahedron Letters (1998), 39(7), 567-570

CODEN: TELEAY; ISSN: 0040-4069

PB Elsevier Science Ltd.

DT Journal

LA English

AB Triarylcarbenium and monomethine cations are poorly retained on polar chromatog. phases when associated with TRISPHAT as counterion as opposed to classical anions. This allows an easy separation and purification of these organic cationic salts.

IT 202992-57-8P

RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(purification of cations via chromatog. of their TRISPHAT salts)

RN 202992-57-8 CAPLUS

CN 3H-Indolium, 2-[(Z)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-

ylidene)methyl]-1,3,3-trimethyl-, (Z)-,

(OC-6-11)-tris[3,4,5,6-tetrachloro-1,2-benzenediolato(2-)-

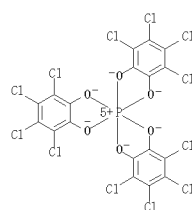
κO,κO]phosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 215797-11-8

CMF C18 C112 O6 P

CCI CCS



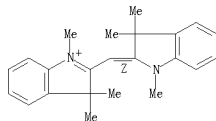
CM 2

CRN 59651-99-9

CMF C23 H27 N2

Double bond geometry as shown.

L4 ANSWER 45 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 46 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1997:631963 CAPLUS

DN 127:241224

OREF 127:46927a,46930a

TI 1,3,3-Trimethyl-5-styryl-2-[(1,3,3-trimethyl-5-styryl-2-indolylidene)methyl]-3H-indolium picrate: an extended trichromophoric system

AU Johannes, Hans-Hermann; Grahn, Walter; Dix, Ina; Jones, Peter G.

CS Institut Organische Chemie, Technische Univ. Braunschweig, Braunschweig, 38028, Germany

SO Acta Crystallographica, Section C: Crystal Structure Communications

(1997), C53(9), 1363-1366

CODEN: ACSCBE; ISSN: 0108-2701

PB Munksgaard

DT Journal

LA English

AB The trichromophoric system of the title compound, C39H39N2+.C6H2N3O7-, adopts a di-cis conformation in which the indolenine end groups are mutually rotated; the interplanar angle is 47.1(1)°. The trans-configure styryl moieties are anti-orientated relative to the cyanine unit. The length of the extended chromophore (H19...H19') is 26.0 Å. Crystallog. data are given.

IT 196384-47-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and crystal structure of)

RN 196384-47-5 CAPLUS

CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-5-(2-phenylethenyl)-2H-indol-

2-ylidene)methyl]-1,3,3-trimethyl-5-(2-phenylethenyl)-, [1E[Z(E)]]-, salt

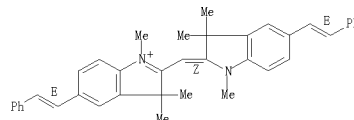
with 2,4,6-trinitrophenol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 196384-46-4

CMF C39 H39 N2

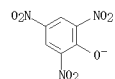
Double bond geometry as shown.



CM 2

CRN 14798-26-6

CMF C6 H2 N3 O7

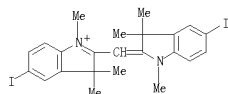


IT 164069-71-0

L4 ANSWER 46 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of styrene in anhyd. triethylamine and palladium acetate and triphenylphosphine in anhyd. DMF of)
 RN 164069-71-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-5-iodo-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-5-iodo-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 164069-70-9
 CMF C23 H25 I2 N2



CM 2

CRN 14874-70-5
 CMF B F4
 CCI CCS



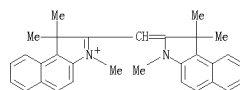
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 47 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1996:461964 CAPLUS
 DN 125:237860
 OREF 125:23701a,23704a
 TI Photosensitive material for lithographic plates and method for making the plates
 IN Maehashi, Tatsuichi; Matsumoto, Shinji; Kuroki, Takaaki; Kawakami, Sota
 PA Konishiroku Photo Ind, Japan
 SO Jpn. Kokai Tokkyo Koho, 20 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08114916	A	19960507	JP 1994-247968	19941013
JP 1994-247968		19941013		
AB				
IT				
157075-01-9				
RL: CAT (Catalyst use); USES (Uses)				
(near-IR-sensitive photosensitive composition for lithog. plates containing cationic dye organoboron salts and B salts as photopolymn. initiators)				
RN 157075-01-9 CAPLUS				
CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, (T-4)-butyltriphenylborate(1-) (9CI) (CA INDEX NAME)				

CM 1

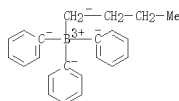
CRN 157075-00-8
 CMF C31 H31 N2



CM 2

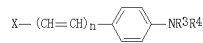
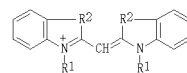
CRN 47252-39-1
 CMF C22 H24 B
 CCI CCS

L4 ANSWER 47 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L4 ANSWER 48 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1996:134375 CAPLUS
 DN 124:302619
 OREF 124:55842a,55843a
 TI Presensitized lithographic plate with UV absorbent-containing overcoat layer
 IN Oota, Tomohisa; Tono, Katsuhiko; Matsubara, Shinichi; Tomyasu, Hiroshi; Sasaki, Mitsuru
 PA Konishiroku Photo Ind, Japan; Mitsubishi Kagaku KK
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07311458	A	19951128	JP 1994-124726	19940516
JP 1994-124726		19940516		
OS MARPAT 124:302619				
GI				

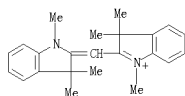


AB The title plate comprises a support with coatings of a photosensitive layer containing an o-quinonediazide compound and an UV absorbent-containing overcoat layer. The overcoat layer contains a cyanine dye I [R1 = alkyl; R2 = O, S, CH2, CH2]2 and an alkyl borate. The overcoat layer contains an organic dye II (R3-4 = alkyl; X = III, IV, V; R5-6 = alkyl; R7 = H, halo, alkyl, alkoxy, nitro, alkenyl, aryl, aralkyl, alkoxyacarbonyl, arylcarbonyl, acyloxy, acyl, aroxy; n = 1-5, m = 0-4) and a boron compound R8R9R10R11B-.R12R13R14R15N+ (R8-11 = alkyl, aryl, allyl, aralkyl, alkenyl, alkynyl, silyl, alicycyl, (un)saturated heterocyclyl; R12-15 = H, alkyl, aryl, allyl, alkenyl, aralkyl, alkynyl, alicycyl, heterocyclyl). The plate shows good sensitivity, writability with a ballpoint pen, small dot reproducibility, and image-erasing properties. Thus, an Al support was coated with a photosensitive layer containing o-quinonediazido-5-sulfonate of pyrogallol-acetone resin and a novolak resin and with an overcoat layer containing Sumisorb 100 (UV absorbent) to give a presensitized lithog. plate. 61575-70-9

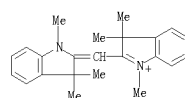
IT RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
 (presensitized lithog. plate with overcoat layer containing UV absorbent or dye or boron compound)

RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)

L4 ANSWER 48 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1996:62250 CAPLUS
 DN 123:11799
 OREF 123:2373a,2376a
 TI Halogenated indocyanines: synthesis, conformational behavior, and light absorption
 AU Grah, Walter; Johannes, Hans Hermann; Rheinheimer, Joachim; Knieriem, Burkhard; Wuerthwein, Ernst Ulrich
 CS Inst. Organische Chemie, Technischen Universitaet Braunschweig, Braunschweig, D-38106, Germany
 SO Liebigs Annalen (1996), (6), 1003-9
 CODEN: LANAEM; ISSN: 0947-3440
 PB VCH
 DT Journal
 LA English
 AB The reactions of an indocyanine and its corresponding 1,3-diaminoallene with N-halodiorganosulfonimides or mol. halogen result in the formation of the four chain-halogenated monomethine cyanines. With an excess of the halogenating agent not only the chain but also the end groups are halogenated, affording further monomethines. The preferred conformations, UV/visible absorptions, and electron densities of the cyanines are calculated by AM1 and PPP methods and exptl. investigated using NMR (DNMR, NOE) as well as UV/visible spectroscopy.
 IT 61575-71-1
 RL: FMU (Formation, unclassified); FRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
 (starting material; synthesis, conformational behavior and light absorption of halogenated indocyanines)
 RN 61575-71-1 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2

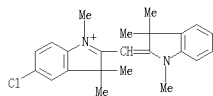


CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

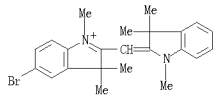
IT 164069-53-8 164069-55-0
 RL: FRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
 (starting material; synthesis, conformational behavior and light absorption of halogenated indocyanines)
 RN 164069-53-8 CAPLUS
 CN 3H-Indolium, 5-chloro-2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 164069-52-7
 CMF C23 H26 Cl N2



CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



RN 164069-55-0 CAPLUS
 CN 3H-Indolium, 5-bromo-2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 164069-54-9
 CMF C23 H26 Br N2

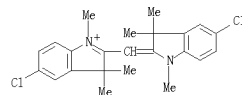


CM 2
 CRN 14874-70-5

L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CMF B F4
 CCI CCS



IT 77118-26-4
 RL: FRP (Properties)
 (synthesis, conformational behavior and light absorption of halogenated indocyanines)
 RN 77118-26-4 CAPLUS
 CN 3H-Indolium, 5-chloro-2-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 77118-25-3
 CMF C23 H25 Cl2 N2

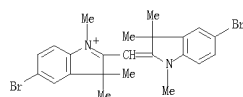


CM 2
 CRN 14874-70-5
 CMF B F4
 CCI CCS



IT 164069-69-6P 164069-71-0P 164069-73-2P
 164069-75-4P 164069-77-6P
 RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis, conformational behavior and light absorption of halogenated indocyanines)
 RN 164069-69-6 CAPLUS
 CN 3H-Indolium, 5-bromo-2-[(5-bromo-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 CM 1
 CRN 164069-68-5
 CMF C23 H25 Br2 N2

L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

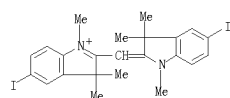


CM 2

CRN 14874-70-5
CMF B F4
CCI CCS

RN 164069-71-0 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-5-iodo-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-5-iodo-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 164069-70-9
CMF C23 H25 I2 N2

CM 2

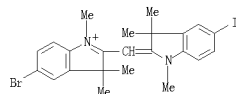
CRN 14874-70-5
CMF B F4
CCI CCS

L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CMF B F4
CCI CCS

RN 164069-77-6 CAPLUS
CN 3H-Indolium, 5-bromo-2-[(1,3-dihydro-5-iodo-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 164069-76-5
CMF C23 H25 Br I N2

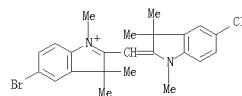
CM 2

CRN 14874-70-5
CMF B F4
CCI CCS

L4 ANSWER 49 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 164069-73-2 CAPLUS
CN 3H-Indolium, 5-bromo-2-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

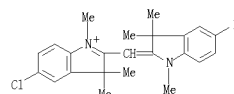
CRN 164069-72-1
CMF C23 H25 Br Cl N2

CM 2

CRN 14874-70-5
CMF B F4
CCI CCS

RN 164069-75-4 CAPLUS
CN 3H-Indolium, 5-chloro-2-[(1,3-dihydro-5-iodo-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 164069-74-3
CMF C23 H25 Cl I N2

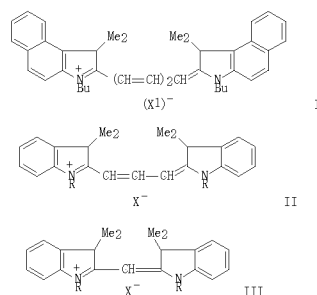
CM 2

CRN 14874-70-5

L4 ANSWER 50 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1995:360906 CAPLUS
DN 122:174600
OREF 122:31805a,31808a
TI Optical recording medium having cyanine dye recording layer
IN Oonishi, Atsushi; Ishioka, Takayuki
PA Nippon Columbia, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JXXXXF
DT Patent
LA Japanese
FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06336086	A	19941206	JP 1992-266494	19920909
JP 2865965	B2	19990308		
FRAI JP 1992-266494		19920909		

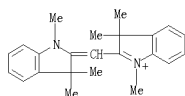


AB The medium consists of a transparent substrate successively coated with a recording layer consisting of a cyanine dye mixture containing I (X1 = ClO4) and II [R = Me, Et, C3N7 (sic), Bu; X = Cl, ClO4] and a reflective layer. In the medium, the recording layer may consist of a mixture of III and II (X1 = Br). Recording was done using the medium by both semiconductor lasers and blue lasers.

IT 36536-20-6, NK 3212
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(laser-sensitive optical recording material having mixed cyanine dye recording layer)

RN 36536-20-6 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)

L4 ANSWER 50 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

● I⁻

L4 ANSWER 51 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1994:641851 CAPLUS

DN 121:241851

OREF 121:43909a, 43912a

TI Presensitized lithographic printing plates with high sensitivity in

near-IR region and manufacture thereof

IN Maehashi, Tatsuichi; Nakatani, Koichi; Watanabe, Hiroshi; Komamura,

Tawara; Kato, Katsunori

PA Konishiroku Photo Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKKXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05197159	A	19930806	JP 1992-87182	19920408
PRAI JP 1991-301983	A1	19911118		

AB The presensitized lithog. printing plate is manufactured by effecting imagewise exposure of a photosensitive material composed of layers of a support having a hydrophilic surface, a photosensitive composition layer, and a transparent cover film in order to change adhesion strength between the photosensitive composition layer and the cover film and/or between the photosensitive composition layer and the support, and peeling off the cover film to leave photosensitive composition images on the support, in which the photosensitive composition comprises at least a compound capable of addition

polymerizing or crosslinking, a borate complex of a cationic dye capable of absorbing near-IR light, and optionally, an organic borate. The title manufacture comprises the steps of effecting imagewise exposure through the support or the transparent cover film and peeling the cover film off. Preferably, imagewise exposure is carried out by scanning with a near-IR laser beam.

IT 157075-01-9

RL: USES (Uses)
(presensitized lithog. printing plate containing)

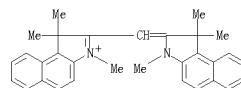
RN 157075-01-9 CAPLUS

CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, (T-4)-butyltriphenylborate(1-) (9CI)
(CA INDEX NAME)

CM 1

CRN 157075-00-8

CMF C31 H31 N2



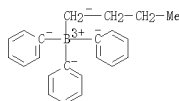
CM 2

CRN 47252-39-1

CMF C22 H24 B

CCI CCS

L4 ANSWER 51 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L4 ANSWER 52 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1994:645360 CAPLUS

DN 121:145360

OREF 121:26069a, 26072a

TI Image forming method

IN Watanabe, Hiroshi; Maehashi, Tatsuichi; Nakatani, Koichi; Kato, Katsunori;

Komamura, Tawara

PA Konishiroku Photo Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKKXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05265204	A	19931015	JP 1992-79928	19920401
US 5346801	A	19940913	US 1993-83497	19930318
PRAI JP 1992-7785	A1	19920120		
JP 1992-79928	A	19920401		

AB In the title image forming method which involves use of an image forming material comprising a photosensitive composition layer and a cover film in order on its support, the photosensitive composition contains an addition-polymerizable or crosslinkable compound, and a borate complex of a cationic dye, and an image is formed by scan exposing the image forming material to a laser beam to cause different adhesive strength levels of the photosensitive layer to the support or the cover film between the exposed and unexposed areas, releasing the cover film to form an image on the support or on the cover film. 2 Variations are also claimed.

IT 157075-01-9

RL: USES (Uses)
(photopolym. using photosensitive material from)

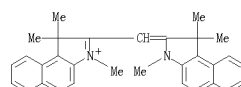
RN 157075-01-9 CAPLUS

CN 1H-Benz[e]indolium, 2-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)methyl]-1,1,3-trimethyl-, (T-4)-butyltriphenylborate(1-) (9CI)
(CA INDEX NAME)

CM 1

CRN 157075-00-8

CMF C31 H31 N2



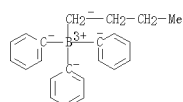
CM 2

CRN 47252-39-1

CMF C22 H24 B

CCI CCS

L4 ANSWER 52 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L4 ANSWER 53 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1994:335207 CAPLUS

DN 120:335207

OREF 120:58729a, 58732a

TI Optical recording media with cyanine dyes and polymethyl methacrylate

IN Ishioka, Takayuki; Oonishi, Atsushi

PA Nippon Columbia, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

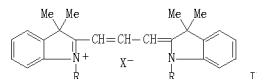
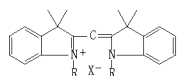
CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06040161	A	19940215	JP 1992-29922	19920122
PRAI	JP 1992-29922		19920122		
OS	MARPAT 120:335207				
GI					



AB The media contain a transparent substrate successively coated with a recording layer containing a mixture with a cyanine-based organic dye I (R = Me, Et, C3H7, C4H9; X- = Cl-, ClO4-) and poly(Me methacrylate) and a reflection layer. The dye maybe II (R = Me, Et, C3H7; X = I-, Cl-, Br-, ClO4-).

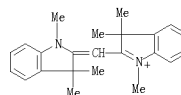
IT 36536-20-6, NK 3212

RL: USES (Uses)

(optical recording media containing)

RN 36536-20-6 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)



● I-

L4 ANSWER 54 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 54 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1993:263954 CAPLUS

DN 118:263954

OREF 118:45713a, 45716a

TI Optical recording media with recording layer containing cyanine dyes

IN Ishioka, Takayuki; Oonishi, Atsushi

PA Nippon Columbia, Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

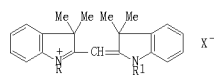
CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06088879	A	19930219	JP 1991-221161	19910807
PRAI	JP 1991-221161		19910807		
OS	MARPAT 118:263954				
GI					



AB Optical recording media comprising a transparent substrate, a recording layer containing cyanine dyes I (R, R1 = Me, Et, C3H7; X = ClO4, iodine), and a reflective layer are claimed. High-d. recording by short-wavelength laser beam is accomplished by using I.

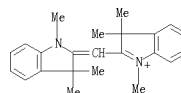
IT 36536-20-6

RL: USES (Uses)

(optical recording media with recording layer containing, for high-d. recording by short-wavelength laser beam)

RN 36536-20-6 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)



● I-

L4 ANSWER 55 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1992:642832 CAPLUS
 DN 117:242832
 OREF 117:41841a, 41844a
 TI Cyanine dye laser recording medium
 IN Unehara, Masaaki
 PA Ricoh K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04074690	A	19920310	JP 1990-188221	19900717
JP 1990-188221		19900717		

AB In the title recording medium made by forming directly or through an undercoating layer on a substrate a laser recording layer based on an organic dye(s), the organic dye(s) is a cyanine dye and the recording layer has a spectral absorption peak at 400-500 nm. The recording medium is claimed to improve recording d. >4 times and is capable of being used to record moving images which needs a high-capacity recording medium.

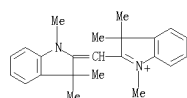
IT 103998-41-0 144527-14-0
 RL: USES (Uses)
 (laser recording media containing)

RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14797-73-0

CMF C1 04



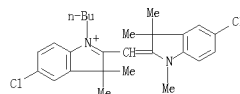
RN 144527-14-0 CAPLUS
 CN 3H-Indolium, 1-butyl-5-chloro-2-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl-, perchlorate (1:1) (CA INDEX NAME)

L4 ANSWER 55 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 1

CRN 144527-13-9

CMF C26 H31 Cl2 N2



CM 2

CRN 14797-73-0

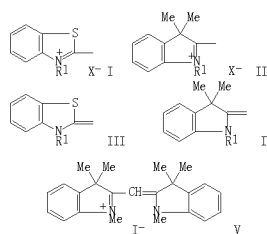
CMF C1 04



L4 ANSWER 56 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1992:13346 CAPLUS
 DN 116:13346
 OREF 116:2306a, 2306a
 TI Photosensitive yellow toners using cyanine dye as sensitizing dye
 IN Urano, Akiyoshi
 PA Mita Industrial Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03160461	A	19910710	JP 1989-300365	19891117
JP 1989-300365		19891117		

OS MARPAT 116:13346
 GI



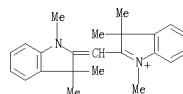
AB The title toners, comprising ZnO, a sensitizing dye, and a binder resin, and showing photosensitivity at 400-500 nm, contain, as the dye, a cyanine dye RCH:Z [R = I, II; Z = III, IV (R1 = Me, Et, Bu, C7H15, CH2CO2H, C2H4CO2H, allyl; X = iodo, Cl, Br, ClO4, NO3, etc.)]. The toners show very low sensitivity at >500 nm and are useful in one-shot color system. Thus, a dispersion containing SOX 100 (ZnO), NK 3212 (V), and PA 525 (acrylic monomer-styrene copolymer) was spray-dried to give a yellow toner, which was mixed with a ferrite carrier to give a developer.

IT 36536-20-6
 RL: USES (Uses)
 (electrophotog. developer photosensitive yellow toner containing, NK 3212)

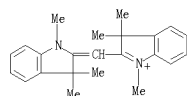
RN 36536-20-6 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)

L4 ANSWER 56 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

● I⁻

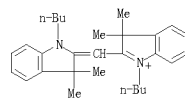
LA ANSWER 57 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1991:431100 CAPLUS
 DN 115:31100
 OREF 115:5453a
 TI Electronic properties of polymethine compounds: 1. Frontier electron levels and electron donor ability
 AU Kachkovskii, A. D.; Dyadyusha, G. G.; Dekhtyar, M. L.
 CS Inst. Org. Chem., Kiev, 252660, USSR
 SO Dyes and Pigments (1991), 15(3), 191-202
 CODEN: DYPIDX; ISSN: 0143-7208
 DT Journal
 LA English
 AB The relation between frontier MOs (FMOs) and chemical structure of linear polymethine comods. (PMCs) is investigated. A new parameter, the electron donor ability (σ_0) of the PMC, is proposed in order to characterize the frontier level disposition with respect to the Fermi level. Based on FMOs' symmetry and mol. function periodicity, a classification of PMCs is developed, viz. polyenes of class A, polymethines of class A, polyenes of class B and polymethines of class B. A relation between the electron donor ability σ_0 and the topol. indexes of the end groups is observed for polymethine dyes and betarylpolynes; moving from polymethines to polyenes with the same end groups is accompanied by an essential shifting up or down of frontier levels. Theor. results are illustrated by exptl. data.
 IT 61575-70-0
 RL: PRP (Properties)
 (frontier MO level of, electron donor ability in relation to)
 RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl- (CA INDEX NAME)



LA ANSWER 58 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1989:622123 CAPLUS
 DN 111:222123
 OREF 111:36729a,36732a
 TI Dye-sensitized thiol-containing photopolymerizable compositions
 AU Adair, Paul G.
 PA Mead Corp., USA
 SO Bur. Pat. Appl., 6 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 318336	A2	19890631	EP 1988-311263	19881128
EP 318336	A3	19901114		
EP 318336	B1	19970621		
US 4874685	A	19891017	US 1987-125963	19871127
CN 1033699	A	19890705	CN 1988-108457	19881026
DK 8806585	A	19890628	DK 1988-6585	19881125
JP 02000968	A	19900105	JP 1988-300439	19881128

PRAI US 1987-125963
 OS MARPAT 111:222123
 AB A dye-sensitized photopolymerizable composition is described comprising: a free radical addition polymerizable or crosslinkable composition; a photoreducible dye; and a thiol, preferably a heterocyclic thiol. The dye and the thiol together work as an initiator system. Photoimaging materials, including a full-color imaging material comprising microcapsules of the above composition are claimed. Thus, a photoimaging composition contained trimethylolpropane triacrylate, 1,1'-dibutyl-3,3,3',3'-tetramethylindocarbocyanine iodide, and 2-mercaptobenzoxazole.
 IT 123743-02-2
 RL: USES (Uses)
 (photoimaging composition containing thiol and, as photoinitiator system)
 RN 123743-02-2 CAPLUS
 CN 3H-Indolium, 1-butyl-2-[(1-butyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-3,3-dimethyl-, iodide (1:1) (CA INDEX NAME)

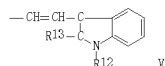
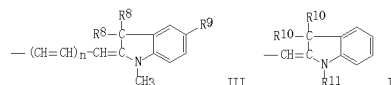
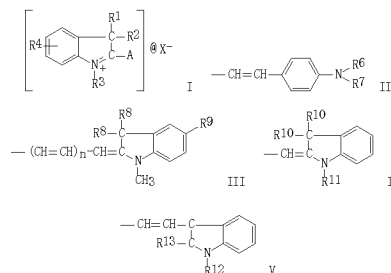


● I⁻

LA ANSWER 59 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1989:104901 CAPLUS
 DN 110:104901
 OREF 110:17171a,17174a
 TI Electrophotographic developer dry toner
 IN Isoda, Tetsuo
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXAXF
 DT Patent
 LA Japanese
 FAN CNT 1

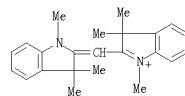
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63201665	A	19880819	JP 1987-33419	19870218

PRAI JP 1987-33419
 OS MARPAT 110:104901
 GI

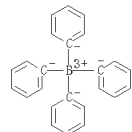


AB The title toner contains a charge-controlling agent I [R1-R3 = H, alkyl, halogenated alkyl, alkoxy, amino, amido, Ph, (substituted) phenyl; R4 = H, halogen, alkoxy, alkyl fatty acid, alkyl fatty acid ester, amino, amido, phenyl; X = B- (C6H5)4, R5OM-; if R5 = Cl-30 aliphatic or aromatic group m = 3,4; A = H (R6,R7 = H, alkyl halogenated alkyl, (substituted) phenyl), III (R8,R9 = H, alkyl, amino amido, alkoxy; n = 1, 2); IV (R10,R11 = H, alkyl, phenyl), or V (R12,R13 = H, alkyl, phenyl)]. High-quality copying images can be obtained even if copying environment is changed.
 IT 118996-05-7 118996-07-9 118996-12-6
 RL: USES (Uses)
 (charge-controlling agent, electrophotog. developer dry toner using)
 RN 118996-05-7 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetraphenylborate (1-) (9CI) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2

LA ANSWER 59 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2
 CRN 4358-26-3
 CMF C24 H20 B
 CCI CCS



RN 118996-07-9 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, methanesulfonate (1:1) (CA INDEX NAME)
 CM 1
 CRN 61575-70-0
 CMF C23 H27 N2
 CM 2
 CRN 16053-58-0
 CMF C H3 O3 S

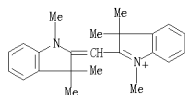


RN 118996-12-6 CAPLUS

L4 ANSWER 59 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3-trimethyl-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

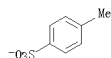
CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

CRN 16722-51-3
 CMF C7 H7 O3 S



L4 ANSWER 60 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1986:581394 CAPLUS
 DN 106:181394
 OREF 106:29101a,29104a
 TI UV-VIS and ESR spectroscopic investigations on polymethine dye radicals
 AU Stiehl, J.; Friedrich, M.; Kuehn, V.; Von Grossmann, J.; Fassler, D.
 CS Komb. Wolfen, VEB Fotochem., Wolfen, Ger. Dem. Rep.
 SO Journal of Information Recording Materials (1986), 14(5), 215-26
 CODEN: JIRMEA; ISSN: 0863-0453
 DT Journal
 LA German
 GI

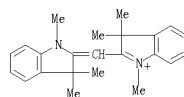
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Neutral and cationic radicals produced by electrochem. oxidation and reduction of polymethine dyes I-III were characterized by absorption and ESR spectroscopy. The results indicated that during photolysis of the sensitizing polymethine dyes adsorbed on Ag halide crystals, dye reduction takes place resulting in formation of the neutral radicals.

IT 103998-41-0
 RL: USES (Uses)
 (electrochem. reduction and oxidation of, characterization of radicals produced in, in relation to photog. spectral sensitization)
 RN 103998-41-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3-trimethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

CRN 14797-73-0
 CMF C1 O4



L4 ANSWER 60 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1986:234393 CAPLUS
 DN 104:234393
 OREF 104:37018b,37019a
 TI Optical information recording material
 IN Sato, Tsutomu; Abe, Michiharu; Oba, Hideaki; Ueda, Yutaka; Uemura, Masaaki
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKKXAF
 DT Patent
 LA Japanese
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60252345	A	19851213	JP 1984-108440	19840530
JP 1984-108440		19840530		

GI For diagram(s), see printed CA Issue.

AB The recording layer of the title material contains I (R = H, unsubstituted alkyl; R1, R2 = alkyl, aryl, aralkyl, alkenyl; A, Al = heterocyclic ring; X = anion, k, m = 0, 1, 2). Writing and reading may be carried out by using a semiconductor laser light. Informations recorded have high d., and are durable. Thus, a 1,2-dichloroethane solution of II was spin-coated on a PMMA disk to form a 650 Å layer. The recording was carried out by using a 790 nm laser light. The signal-to-noise ratio before and after irradiation of the recorded disk with 54,000 lx W light for 50 h were 55 and 53 dB, resp.

IT 102509-17-1 102522-10-1 102522-12-3
 RL: USES (Uses)

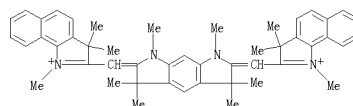
(optical recording material with photosensitive layer containing)

RN 102509-17-1 CAPLUS

CN 3H-Benz[*g*]indolium, 2,2'-[(5,7-dihydro-1,3,3,5,5,7-hexamethylbenzo[1,2-*b*:5,4-*b'*]dipyrrole-2,6(1H,3H)-diylidene)dimethylidene]bis[1,3,3-trimethyl-, salt with 4-methylbenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

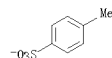
CM 1

CRN 102509-16-0
 CMF C48 H52 N4



CM 2

CRN 16722-51-3
 CMF C7 H7 O3 S

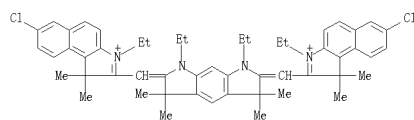


RN 102522-10-1 CAPLUS

L4 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
 CN 1H-Benz[e]indolium, 2,2'-[(1,7-diethyl-5,7-dihydro-3,3,5,5-tetramethylbenzo[1,2-b:5,4-b']dipyrrole-2,6(1H,3H)-diylidene)dimethyldiynyl]bis[7-chloro-3-ethyl-1,1-dimethyl-, diperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 102522-09-8
 CMF C52 H58 Cl2 N4



CM 2

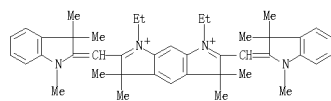
CRN 14797-73-0
 CMF Cl O4



RN 102522-12-3 CAPLUS
 CN Benzo[1,2-b:5,4-b']dipyrrolium, 2,6-bis[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,7-diethyl-3,5-dihydro-3,3,5,5-tetramethyl-, perchlorate (1:2) (CA INDEX NAME)

CM 1

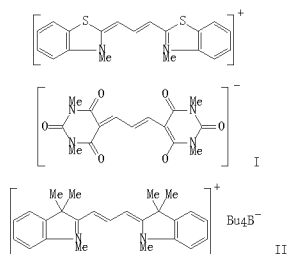
CRN 102522-11-2
 CMF C42 H52 N4



CM 2

CRN 14797-73-0
 CMF Cl O4

L4 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1986:35457 CAPLUS
 DN 104:35457
 OREF 104:5815a,5818a
 TI Solid-state chemistry of cyanine-type dyes and the effect of two novel counterions on their crystal properties
 AU Etter, Margaret C.; Holmes, Brian N.; Kress, Ruth B.; Filipovich, George
 CS Chem. Dep., Univ. Minnesota, Minneapolis, MN, 55455, USA
 SO Israel Journal of Chemistry (1985), 25 (3-4), 264-73
 CODEN: ISJCAT; ISSN: 0021-2148
 DT Journal
 LA English
 GI



AB The chemical of two novel cyanine dye salts whose properties are controlled by the nature of their counterions is reported. In cyanine-oxonol salts (i.e., I [92346-43-5]), the oxonol counterion is a large planar dye which forms crystalline dye aggregates with cyanine ions. There is a multiplicity of polymorphic forms of these mixed dyes reflecting multiple favorable dye aggregate geometries. The cyanine-borate salts (e.g., II [91630-32-9]) undergo intermol. solid-state reactions. In either large single crystals or dispersions of the latter salts in polymer binders, alkyl transfer from the anion to chromophore can be induced thermally or photochem.

IT 99635-80-0
 RL: PRP (Properties)
 (crystalline properties of)

RN 99635-80-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrabutylborate (1-) (9CI) (CA INDEX NAME)

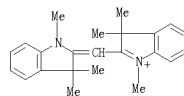
CM 1

CRN 61575-70-0
 CMF C23 H27 N2

L4 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

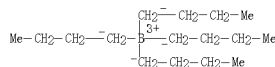


L4 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

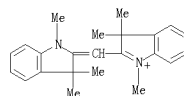
CRN 24651-47-6
 CMF Cl6 H36 B
 CCI CCS



IT 99626-73-0 99635-81-1
 RL: PROC (Process)
 (irradiation of)
 RN 99626-73-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetraethylborate (1-) (9CI) (CA INDEX NAME)

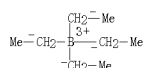
CM 1

CRN 61575-70-0
 CMF C23 H27 N2



CM 2

CRN 44772-63-6
 CMF C8 H20 B
 CCI CCS

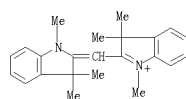


RN 99635-81-1 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-

L4 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
1,3,3-trimethyl-, tetramethylborate(1-) (9CI) (CA INDEX NAME)

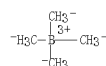
CM 1

CRN 61575-70-0
CMF C23 H27 N2



CM 2

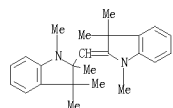
CRN 37668-04-5
CMF C4 H12 B
CCI CCS



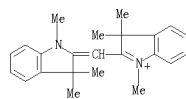
IT 99626-74-1P
RL: SYN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 99626-74-1 CAPLUS

CN 1H-Indole, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,3-dihydro-1,2,3,3-tetramethyl- (CA INDEX NAME)



L4 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
CRN 61575-70-0
CMF C23 H27 N2



L4 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1984:501325 CAPLUS
DN 101:101325
OREF 101:15359a,15362a
TI Dispersed imaging systems with tetra(hydrocarbyl)borate salts
IN Holmes, Brian N.; Dalzell, Rex J.; Aspen, Steven M.
PA Minnesota Mining and Manufacturing Co., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4450227	A	19840522	US 1982-436264	19821025
CA 1206032	A1	19860617	CA 1983-433655	19831020
AU 8520511	A	19840603	AU 1983-20511	19831024
AU 561050	B2	19870430		
BR 8505861	A	19840529	BR 1983-5861	19831024
EP 109773	A2	19840530	EP 1983-306451	19831024
EP 109773	A3	19850123		
EP 109773	B1	19870722		
ZA 8507899	A	19840627	ZA 1983-7899	19831024
JP 59095534	A	19840601	JP 1983-199880	19831025
JP 05042654	B	19930629		
PRAI US 1982-436264	A	19821025		

OS MARPAT 101:101325
AB A photoimaging system comprises a dispersion of a tetra(hydrocarbyl)borate and a dye. Thus, a polyester support was coated with an emulsion containing (1) a dispersion of Indolenine Red perfluoro(4-ethylfluorocyclohexane) sulfonate 200, tetraethylammonium tetrabutylborate 350 mg, and a binder solution (5 weight% solids solution of Me methacrylate-methacrylic acid polymer in Et acetate) 9.8 mL and (2) a dispersion of a dioctylsulfosuccinate monosodium salt solution in EtOH (0.1 g/mL) 1.5 mL and a gelatin solution (3.75% in H2O at 40°) 55 g, dried 2 h, and imagewise exposed with a 500 W bulb of a side projector for 3 min to provide a color pos. image.

IT 80989-62-4
RL: USES (Uses)
(photoimaging system containing tetraethylammonium tetrabutylborate and)
RN 80989-62-4 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, 1,2,2,3,3,4,5,5,6,6-decafluoro-4-(1,1,2,2,2-pentafluoroethyl)cyclohexanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 80988-54-1
CMF C8 F15 O3 S



CM 2

L4 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1982:152896 CAPLUS
DN 96:152896
OREF 96:24969a,24992a
TI Imaging systems with tetra(aliphatic)borate salts
IN Dalzell, Rex J.; Goettert, Edward J.; Tiers, George V. D.
PA Minnesota Mining and Manufacturing Co., USA
SO Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 40977	A1	19811202	EP 1981-302296	19810522
EP 40977	B1	19850123		
US 4507182	A	19811222	US 1980-152601	19800523
CA 1144802	A1	19830419	CA 1981-375643	19810416
JP 57019734	A	19820202	JP 1981-77878	19810522
JP 01051174	B	19891101		
BR 8103191	A	19820209	BR 1981-3191	19810522
AU 8170955	A	19820513	AU 1981-70955	19810522
AU 545890	B2	19850808		
ZA 8103471	A	19820728	ZA 1981-3471	19810522

PRAI US 1980-152601 A 19800523
AB A photoimaging element with improved speed comprises a polymeric binder, a cationic dye and a tetra(aliphatic)borate having the formula [BRR1R2R3]X+ (R1,R2,R3 = aliphatic group; X+ = any cation except H+). Thus, a polyester support was coated with a solution (10% solids) containing Indolenine Red 50, tetraethylammonium tetramethylborate 100 mg, and poly(vinyl acetate) 5 mL in a 3:1 MeOEt:PhMe mixture, dried, imagewise exposed and fixed in HCl vapor for 2 min to give an image.

IT 80989-62-4
RL: USES (Uses)
(photoimaging composition containing polymeric binder and tetraaliph. borate salt and)

RN 80989-62-4 CAPLUS
CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, 1,2,2,3,3,4,5,5,6,6-decafluoro-4-(1,1,2,2,2-pentafluoroethyl)cyclohexanesulfonate (1:1) (CA INDEX NAME)

CM 1

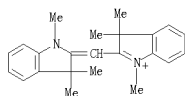
CRN 80988-54-1
CMF C8 F15 O3 S



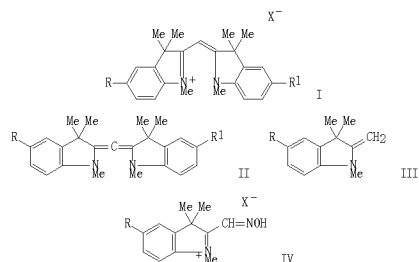
CM 2

CRN 61575-70-0
CMF C23 H27 N2

L4 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

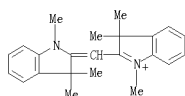


L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1981:156689 CAPLUS
 DN 94:156689
 OREF 94:25612h,25613a
 TI Allenes formed by deprotonation of polymethine cations. I.
 1,3-Diaminoallenes from monomethinecyanines with indoline/indoleninium end
 groups - synthesis, MS and carbon-13 NMR spectra
 AU Grahm, Walter
 CS Fachber. Chem., Univ. Marburg, Marburg, D-3550, Fed. Rep. Ger.
 SO Liebigs Annalen der Chemie (1981), (1), 107-21
 CODEN: LACHDL; ISSN: 0170-2041
 DT Journal
 LA German
 OS CASREACT 94:156689
 GI



AB Thermal decomposition of methine cyanines I (R = R1 = H, MeO, Me, Cl, NO2; R =
 NO2, R1 = H; X = BF4, iodo) in the mass spectrometer or deprotonation of I
 cations (NaH) gave high yields of diaminoallenes II. The effects of R and
 R1 of I and II on the chemical shifts of the methine and allenic C atoms,
 resp., were studied. The NO2 group of I (R = NO2, R1 = H, X = BF4) had a
 significant 13C chemical shift effect through 13 covalent bonds on the C-5
 signal. I were prepared by oximation (NaNO2, AcOH) of indolines III at
 10-15° and treatment of the product indolenium salts IV with more
 III in Ac2O.
 IT 36536-20-6P 77118-22-OP
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and mass spectrum of)
 RN 36536-20-6 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)

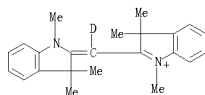
L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



● I⁻
 RN 77118-22-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl-d]-
 1,3,3-trimethyl-, tetrafluoroborate (1-) (9CI) (CA INDEX NAME)

CM 1

CRN 77118-21-9
 CMF C23 H26 D N2



CM 2

CRN 14874-70-5
 CMF B P4
 CCI CCS

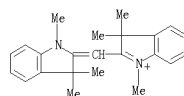


IT 61575-71-1P 77118-24-2P 77118-26-4P
 77118-28-6P 77118-30-0P 77173-25-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation, thermalolysis or deprotonation of, and NMR and mass spectrum of)
 RN 61575-71-1 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3-trimethyl-, tetrafluoroborate (1-) (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0
 CMF C23 H27 N2

L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

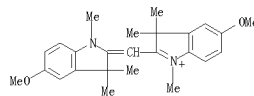
CRN 14874-70-5
 CMF B P4
 CCI CCS



RN 77118-24-2 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-6-methoxy-1,3,3-trimethyl-2H-indol-2-
 ylidene)methyl]-6-methoxy-1,3,3-trimethyl-, tetrafluoroborate (1-) (1:1)
 (CA INDEX NAME)

CM 1

CRN 77118-23-1
 CMF C25 H31 N2 O2



CM 2

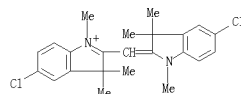
CRN 14874-70-5
 CMF B P4
 CCI CCS



RN 77118-26-4 CAPLUS
 CN 3H-Indolium, 6-chloro-2-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-
 ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate (1-) (1:1) (CA INDEX
 NAME)

L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

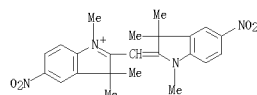
CM 1

CRN 77118-25-3
CMF C23 H25 Cl2 N2

CM 2

CRN 14874-70-5
CMF B P4
CCI CCSRN 77118-28-6 CAPLUS
CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-5-nitro-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-5-nitro-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

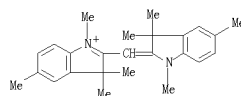
CM 1

CRN 77118-27-5
CMF C23 H25 N4 O4

CM 2

CRN 14874-70-5
CMF B P4
CCI CCS

L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



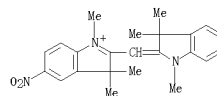
CM 2

CRN 14874-70-5
CMF B P4
CCI CCS

L4 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 77118-30-0 CAPLUS
CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-6-nitro-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 77118-29-7
CMF C23 H26 N3 O2

CM 2

CRN 14874-70-5
CMF B P4
CCI CCSRN 77173-25-2 CAPLUS
CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3,5-tetramethyl-2H-indol-2-ylidene)methyl]-1,3,3,5-tetramethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 77173-24-1
CMF C25 H31 N2

L4 ANSWER 66 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1978:445058 CAPLUS

DN 89:45058

OREF 89:7031a, 7034a

TI Radicals from polymethine dyes. IV. Dication radicals from polymethinecyanine dyes with indolenine end groups

AU Oehling, H.; Baer, F.

CS Fachber. Chem., Univ. Marburg, Marburg, Fed. Rep. Ger.

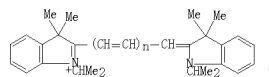
SO Organic Magnetic Resonance (1977), 9(8), 465-6

CODEN: OMRBDD; ISSN: 0030-4961

DT Journal

LA English

GI



AB Dication radicals were obtained by electrolytic oxidation of the polymethinecyanine dyes I (n = 0) and I' (n = 1). Their ESR spectra confirmed the expected structure of the radicals.

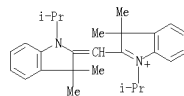
IT 65891-51-2

RL: FRP (Properties)

(ESR of)

RN 65891-51-2 CAPLUS

CN 3H-Indolium, 2-[[1,3-dihydro-3,3-dimethyl-1-(1-methylethyl)-2H-indol-2-ylidene)methyl]-3,3-dimethyl-1-(1-methylethyl)-, radical ion(1+) (9CI) (CA INDEX NAME)



IT 54478-56-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(electrochem. oxidation of, ESR study of)

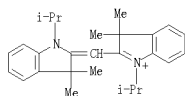
RN 54478-56-7 CAPLUS

CN 3H-Indolium, 2-[[1,3-dihydro-3,3-dimethyl-1-(1-methylethyl)-2H-indol-2-ylidene)methyl]-3,3-dimethyl-1-(1-methylethyl)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 54478-55-6
CMF C27 H35 N2

L4 ANSWER 66 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

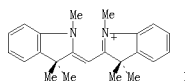
CRN 14874-70-5

CMF B F4

CCI CCS



L4 ANSWER 68 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1976:427596 CAPLUS
 DN 85:27596
 OREF 85:4435a, 4438a
 TI Bis(1,3,3-trimethylindolenin-2-yl)monomethinium tetrafluoroborate,
 C23H27N2+.BF4-
 AU Allmann, Rudolf; Debaerdemaeker, Tony
 CS Fachber. Geowiss., Philipps-Univ., Marburg, Fed. Rep. Ger.
 SO Crystal Structure Communications (1976), 5(2), 211-14
 CODEN: CSCMCS; ISSN: 0362-1742
 DT Journal
 LA English
 GI



I

AB The structure of the cation I of the title compound was determined by x-ray diffraction. The structure was solved by the MULTAN program and refined to an R of 6.9%. The crystals are monoclinic, space group P2₁/n, with a 12.831(4), b 13.306(6), c 11.724(4) Å, and β 107.34(4)°; d (calculated) = 1.264 for Z = 4. Both indolenine rings are nearly planar but are twisted by 21° and 27° with respect to the central plane C(11)-C(1)-C(21). The cyanine cations form chains in the [10,hivn.1] direction by short contacts of 4.68 and 3.41 Å. The structure is compared to other polymethinecyanine structures.

IT 59652-00-5

RL: PRP (Properties)

(structure of)

RN 59652-00-5 CAPLUS

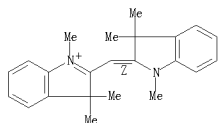
CN 3H-Indolium, 2-[(Z)-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 59651-99-9

CMF C23 H27 N2

Double bond geometry as shown.



CM 2

CRN 14874-70-5

L4 ANSWER 67 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1977:56724 CAPLUS

DN 86:56724

OREF 86:9063a, 9056a

TI Carbon-13 NMR spectra of di- and trinuclear polymethine cyanine dyes

AU Grahn, W.

CS Fachbereich Chem., Univ. Marburg, Marburg, Fed. Rep. Ger.

SO Tetrahedron (1976), 32(15), 1931-9

CODEN: TETRA8; ISSN: 0040-4020

DT Journal

LA German

GI For diagram(s), see printed CA Issue.

AB 13C NMR chemical shifts are reported and assigned for the title compds. I (X = OMe2, R = Me; X = S, R = Et; n = 0-3), II [38575-73-4], and III [38441-83-7]. The influence of the heterocyclic groups and the chain length on the chemical shifts of the methine C atoms and on the corresponding 1J13C-1H coupling const. was studied. 13C chemical shifts of indolenine derivs. correlate with calculated π-electron densities. The combined application of 1H and 13C NMR spectroscopy is a useful method for detecting steric hindrance in polymethine.

IT 61575-71-1

RL: PRP (Properties)

(carbon-13 NMR of)

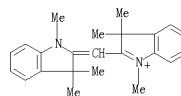
RN 61575-71-1 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 61575-70-0

CMF C23 H27 N2



CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



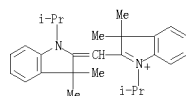
L4 ANSWER 68 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CMF B F4

CCI CCS



LA ANSWER 69 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1975:100052 CAPLUS
 DN 82:100052
 OREF 82:15975a,15978a
 TI Radicals from polymethinecyanine dyes. I. Polymethinecyanines with an indoline end group
 AU Baer, F.; Oehling, H.
 CS Fachbereich Chem., Univ. Marburg, Marburg, Fed. Rep. Ger.
 SO Organic Magnetic Resonance (1974), 6(8), 421-9
 CODEN: OMRMBD; ISSN: 0030-4921
 DT Journal
 LA German
 GI For diagram(s), see printed CA Issue.
 AB Solution ESR spectra were recorded for radicals prepared by electrolytic reduction of I [54478-56-7], II [54478-58-9], III [54478-60-3], and IV [54478-62-5] dinuclear and trinuclear cyanine dyes containing indolenine end groups. Information about conformations was obtained from coupling consts.
 IT 54478-56-7
 RL: RCT (Reactant); RACT (Reactant or reagent) (electrochem. reduction of)
 RN 54478-56-7 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-3,3-dimethyl-1-(1-methylethyl)-2H-indol-2-ylidene]methyl]-5,5-dimethyl-1-(1-methylethyl)-, tetrafluoroborate(1-)(1:1) (CA INDEX NAME)
 CM 1
 CRN 54478-55-6
 CMF C27 H35 N2

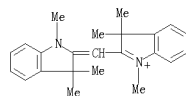


CM 2

CRN 14874-70-5
 CMF B F4
 CCI CCS



LA ANSWER 70 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

● I⁻

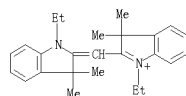
LA ANSWER 70 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1972:106427 CAPLUS
 DN 76:106427
 OREF 76:17113a,17116a
 TI Direct-positive photographic silver halide emulsions containing cyanine dye sensitizers
 IN Shiba, Keisuke; Hinata, Masanao; Ohi, Reichi; Kondo, Tokiharu; Sato, Akira; Yamasue, Koutaro
 PA Fuji Photo Film Co., Ltd.
 SO Ger. Offen., 49 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2127346	A	19711209	DE 1971-2127346	19710602
DE 2127346	B2	19731031		
DE 2127346	C3	19740530		
JP 48042494	B	19731213	JP 1970-47380	19700602
FR 2097822	A5	19720303	FR 1971-19938	19710602
CA 975606	A1	19751007	CA 1971-114642	19710602
US 3887380	A	19750603	US 1973-590264	19730521
PRAI JP 1970-47380	A	19700602		
BE 1971-104148	A	19710602		
CA 1971-114642	A	19710602		
DE 1971-2127346	A	19710602		
FR 1971-19938	A	19710602		
JP 1971-18670	A	19710602		
US 1971-149272	A2	19710602		

GI For diagram(s), see printed CA Issue.
 AB The spectral sensitivity of direct-pos. black and white or color photog. emulsions containing cyanine dye sensitizers such as I is increased by the addition of sulfonates containing diazine or triazine rings, such as II. I is used at 1-200 mg and II at 5-200 mg per kg of Ag halide emulsion. The weight ratio of II:I is 1:5 to 1:50. Both I and II are added to the emulsions as solns., e.g. in MeOH, EtOH, or H₂O. Although emulsifying and phys. ripening of the Ag halide emulsion may take place conventionally, the use of an Ir or Rh salt is preferred. Thus, a Ag(Cl,Br,I) emulsion containing 19.7 I and 400 mg II/kg was coated on a cellulose acetate support and exposed through a step wedge using a sensitometer, and the yellow relative sensitivity determined as 155, Dmax. 2.0, and Dmin. 0.26 vs. 100, 2.1, and 0.74, resp., for a II-free control.
 IT 36536-20-6
 RL: USES (Uses)
 (photog. supersensitizers from sulfonates containing triazines and)
 RN 36536-20-6 CAPLUS
 CN 3H-Indolium, 2-[[1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)

LA ANSWER 71 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1967:120295 CAPLUS
 DN 66:120295
 OREF 66:22343a,22346a
 TI Spectral sensitization. V. The visible and infrared spectral of some very pure 2-bis-benzoxazolyl, 2-bis-indolyl, and 2-bis-quinolyl cyanine iodides
 AU Leifer, Asa; Bonis, David; Boedner, Marie; Dougherty, P.; Fusco, A. J.; Koral, Marvin; LuValle, James E.
 CS Space and Defense Systems, Syosset, NY, USA
 SO Applied Spectroscopy (1967), 21(2), 71-80
 CODEN: APSPA4; ISSN: 0003-7028
 DT Journal
 LA English
 AB cf. CA 65, 17907e. A detailed study of the visible spectra in solution and the ir spectra in the solid state has been made for the following vinylogous series of cyanine dyes: [2-bis(3-ethylbenzoxazolyl)]cyanine iodides, [2-bis(1-ethyl-3,3-dimethylindolyl)]cyanine iodides, and [2-bis(1-ethylquinolyl)]cyanine iodides. Each dye, to be acceptable for study, had to be chromatographically pure, give a correct microchem. elemental analysis, and be free of E.S.R. (free-radical) signals. The characteristic red shift of the principal absorption maximum was observed for these dyes in the visible range as the number of methine linkages increased. A careful comparison of the visible spectral data of the [2-bis(3-ethylbenzoxazolyl)]cyanine iodides with those of the corresponding [2-bis(3-ethylbenzothiazolyl)] and [2-bis(3-ethylbenzoxazolyl)] cyanine iodides, [Leifer et al., Appl. Spectry, 20, 289(1966)] indicates that the electronegativity of the atom S, Se, or O in the heterocyclic rings probably affects the wavelength of the principal absorption maximum. As the electronegativity of the Group VIA atom increases, the principal absorption maximum shifts slightly toward the blue. Assignments of vibrational modes to sep. absorption regions have been made for this vinylogous series of dyes. Each vinylog has a characteristic pattern of resonant-conjugated stretching modes in the region 1600-1400 cm.⁻¹ Some of these modes exhibit a low-frequency shift as the resonant-conjugated chain increases. Comparison of the benzoxazolyl modes with those of the corresponding benzothiazolyl and benzoxazolyl modes indicates that they are probably a function of the electronegativity of S, Se, or O in the heterocyclic rings. As the electronegativity of the Group VIA atom increases, the resonant-conjugated stretching modes shift to higher frequencies. There are also characteristic bands in the 1600-1400 cm.⁻¹ region which are present in all the vinylogs of each series of these dyes. These bands have been assigned to the stretching modes of the fused phenyl stretching rings present in these dyes. It appears that the fused phenyl stretching modes are a function of the groupings OMe2, O, S, Se present in the indolyl, benzoxazolyl, benzothiazolyl, and benzoxazolyl heterocyclic rings, resp. The S and Se atoms affect these modes the least, while the O atom affects these modes the most. Assignments have been made for the aromatic CH out-of-plane bending modes in the region 800-700 cm.⁻¹ for these vinylogous series of cyanine dyes. In the spectra of the 2-bis(indolyl) and 2-bis(quinolyl)cyanine iodides, there is a band appearing in the region 1000-900 cm.⁻¹ which changes systematically with an increase in the number of hydrogens on the bridge. This band has been assigned to the out-of-plane bending vibrations of the hydrogens in a trans configuration on the bridge. No evidence of a cis isomer was observed in the spectra.
 IT 15185-44-1
 RL: PRP (Properties)
 (spectrum (ir and visible) of)
 RN 15185-44-1 CAPLUS
 CN 3H-Indolium, 1-ethyl-2-[[1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-5,3-dimethyl-, iodide (1:1) (CA INDEX NAME)

L4 ANSWER 71 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

● I⁻L4 ANSWER 72 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1961:127685 CAPLUS

DN 55:127685

OREF 55:24019d-f

TI Color sensitization of photoconductors with dyes. I. Color sensitization

of CdS and ZnO with cyanine dyes

AU Hishiki, Yasushi; Tamura, Hifumi; Namba, Susumu; Taki, Ko

CS Inst. Phys. Chem. Research, Tokyo

SO Rikagaku Kenkyusho Hokoku (1960), 36, 386-98

CODEN: RKGHAO; ISSN: 0020-3084

DT Journal

LA Unavailable

AB Color sensitization of photoconductors, such as ZnO powder (I), sublimed film (II) of ZnO, and CdS powder (III) with 16 cyanine dyes were studied. ZnO was sensitized by the dyes at wave lengths corresponding to their absorption maximum. Adsorption isotherms were obtained for I and II. Cyanine dyes were adsorbed by III in alc. solution according to the Freundlich isotherm, but sensitized it feebly. They were not adsorbed by I and II in alc., but followed the Langmuir isotherm, showing adsorption by I and II in aqueous or dilute alc. solution. When I was sensitized by indocarbocyanine, the color sensitivity increases as the amount of dye adsorbed up to dye concentration of 200 μ-moles/l. Supersensitization of I, being analogous to the sensitization of Ag halide, was tried successfully by utilizing the J-band and combining 2 cyanine dyes. For sensitized I, spectral sensitivity, voltage-current characteristics and the relation between photocurrent and illumination intensity were measured. Decrease of sensitization of I occurs on long exposure.

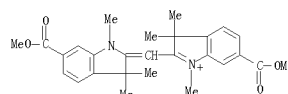
IT 124138-56-3F, 6-Carboxy-2-[(6-carboxy-1,3,3-trimethyl-2-indolylidene)methyl]-1,3,3-trimethyl-3H-indolium chloride, dimethyl ester

RL: PREP (Preparation)

(preparation of)

RN 124138-56-3 CAPLUS

CN 3H-Indolium, 2-[[1,3-dihydro-6-(methoxycarbonyl)-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-6-(methoxycarbonyl)-1,3,3-trimethyl-, chloride (1:1) (CA INDEX NAME)

● Cl⁻

L4 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1960:91750 CAPLUS

DN 54:91750

OREF 54:174131,17414a-i

TI The reactivity of the alkylthio group in nitrogen ring compounds. II.

Cyanine bases from 3,3-dimethyl-2-methylthio-3H-indole

AU Picken, G. B.; Kendall, J. D.

CS Ilford Ltd., Ilford, UK

SO Journal of the Chemical Society (1960) 1529-36

CODEN: JCSOAH; ISSN: 0368-1769

DT Journal

LA Unavailable

OS CASREACT 54:91750

AB cf. CA 44, 4661. 3,3-Dimethyl-2-(methylthio)indolenine (I) (0.96 g.), 0.74 g. quinaldine, and 1.86 g. p-MeC₆H₄SO₂Me (II) was heated at 140° 3 hrs., refluxed 3 hrs. in 3 cc. pyridine, and poured into aqueous KI to give [1,3,3-trimethylindolenine][2-quinoline]methinecyanine iodide (III), m. 256-7° (decomposition). I (3.82 g.), 7.44 g. II, and 2.98 g. 2-methylbenzothiazole (IV) reacted similarly to form [1,3,3-trimethylindolenine][3-methylbenzothiazole]methinecyanine iodide (V), m. 262-3°, as expected, together with the free base, 3,3-dimethyl-2-(3-methylbenzothiazolylidene)methylindolenine (VI), m. 157.5-8.5°, the hydriodide monohydrate (VII) of VI, and bis[3-methyl-2-benzothiazolyl]methinecyanine iodide (VIII). VII was converted to VI by NaOMe. VI refluxed 16 hrs. with MeI gave V; with EtI it gave [1-ethyl-3,3-dimethylindolenine][3-methylbenzothiazole]methinecyanine iodide, m. 247-6°, also prepared from 1-ethyl-2,3,3-trimethylindolenine iodide and 3-methyl-2-(methylthio)benzothiazolium iodide. The noncryst. p-toluenesulfonate of the 1-Me derivative of I was formed slowly by the fusion of 1.91 g. I with 1.86 g. II at 120° 2 hrs.; it (0.75 g.) was refluxed with 1.86 g. 2,3-dimethylbenzothiazolium p-toluenesulfonate (IX) in 15 ml. ethanol containing 0.50 g. NaOMe 2 hrs. to yield V exclusively. 1,3,3-trimethylindoline-2-thione (X), m. 29° b.p. 3.102°, n_D 1.490, was formed by refluxing 12.5 g. 1,3,3-trimethyloxindole and 12.5 g. P₂S₅ in 30 cc. pyridine 3 hrs.; HgCl₂ complex m. 200-200.5°. The noncryst. quaternary salt of X, formed by fusion with II, reacted with IX to yield V exclusively. Dye base VI was prepared by fusion of 1.91 g. I with 3.35 g. IX at 150° 4 hrs. Similar fusion of I with the appropriate heterocyclic quaternary p-toluenesulfonates gave the following 3,3-dimethyl-2-substituted-methylindolenines (substituent given): 1,3,3-trimethyl-2-indolylidene, m. 184°; 1,2-dihydro-1-methyl-2-quinolylidene, m. 151-1.5°; 1,4-dihydro-1-methyl-4-quinolylidene, m. 154°; 3,4-dimethyl-2-thiazolylidene, m. 237°; 3-methyl-4-phenyl-2-thiazolylidene, m. 182-3°; 3-methyl-2-benzoxazolylidene, m. 96-8°; 3-methyl-2-benzoselenazolylidene, m. 164-5°; 3-methyl-2-benzothiazolylidene, m. 222-3°. Yields were usually high but decreased with increasing base strength; reaction failed with the quaternary salts of 1,2-dimethylpyridine and 1,2,3-trimethylbenzimidazole. I reacted with heterocyclic oxomethylene compds. to form merocyanines. I (0.96 g.) and 0.81 g. 3-ethyl-2-thiothiazolid-4-one (N-ethylrhodanic acid) at 190-200° during 6 hrs., lost MeSH to form 6-(3,3-dimethylindolin-2-ylidene)-3-ethyl-2-thiothiazolid-4-one, m. 165-4°, λ 420 mμ (log ε 4.73). Similarly prepared was 4-(3,3-dimethylindolin-2-ylidene)-3-methyl-1-phenylpyrazol-5-one, m. 166-7°, λ 360 mμ (log ε 4.34). Dye bases, isomeric to the series above, resulted from dequaternization of the following [1,3,3-trimethylindolenine-2] [substituted] methinecyanine iodides on refluxing 1 hr. with N,N-diethylamine (substituent given): 1,3,3-trimethylindolenine, m. 238-4°; 1-methyl-2-pyridine, m. 219°; 1-methyl-4-quinoline, m. 258°; 3,4-dimethyl-2-thiazole, m. 244-5°;

L4 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

3-methyl-4-phenyl-2-thiazole, m. 224-5° (decomp.);

3-methyl-2-benzoxazole, m. 298-9° (decomp.);

3-methyl-2-benzoselenazole, m. 245-4°;

3-methyl-2-naphthol[1,2]thiazole, m. 202-3°. The resulting

1,3,3-trimethyl-2-substituted-methyleneindolines were as follows

(substituent given): 2,2'-benzothiazolyl (XI), m. 142°; 2-quinolyl,

m. 144-5°; 4-quinolyl, m. 121°; 4-methyl-2-thiazolyl, m.

133°; 4-phenyl-2-thiazolyl, m. 206°; 2-benzoxazolyl, m.

131-2°; 2-benzoselenazolyl, m. 137-8°; XI was identified by

conversion into [1,3,3-trimethylindolenine-2][3-ethyl-2-benzothiazole]-

methinecyanine perchlorate and XII by synthesis from

2-methylnaphtho[1,2]thiazole and the p-toluenesulfonate of 1-Me deriv. of

I. In all cases dequaternization occurred at the more basic N atom.

Ultraviolet absorption max. were given for both series of isomeric bases

in neutral and acid soln. and for the corresponding monomethinecyanines.

The various shifts were discussed in relation to basicities.

IT 36536-20-6P, 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-

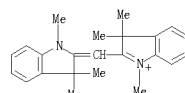
2-ylidene)methyl]-1,3,3-trimethyl-, iodide

RL: PREP (Preparation)

(preparation of)

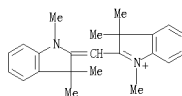
RN 36536-20-6 CAPLUS

CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-1,3,3-trimethyl-, iodide (1:1) (CA INDEX NAME)

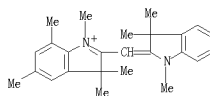
● I⁻

L4 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1931:21768 CAPLUS
 DN 25:21768
 OREF 25:2426h-1, 2427a-e
 TI Conjugated double bonds. XV. Constitution of indolenine yellow
 AU Kuhn, Richard; Winterstein, Alfred; Balser, Georg
 SO Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1931), 63B, 3176-84
 CODEN: BDCBAD; ISSN: 0065-9488
 DT Journal
 LA Unavailable
 GI For diagram(s), see printed CA Issue.
 AB cf. C. A. 25, 1513. As a rule, replacement of methine groups, :CH-, in a polyene chain by :N- has practically no influence on the color. Deviations from this rule occur in the initial members of homologous series and seem always to lie in the direction of stronger absorption by the N-containing comds. An apparent exception was afforded by the violet indolenine red (I) (pure red in solution), obtained from the methylene base (II) and salts or esters of HCOOH, and the greenish yellow compound (III) (called indolenine yellow in the present paper), obtained according to Ger. pat. 459,616 from I and HNO₂ and which, by analogy, was assigned the structure IV. It has been found however, that in the condensation of bases of type II with HNO₂ in the presence of Ac₂O not only H₂O but also 1 mol. HCN is split off. The yellow dye is therefore given the structure III, which makes it a lower vinylene homolog of I and most satisfactorily explains its color. Attempts to obtain III by condensing 1,2,3,3-tetramethylindoleninium salts with 1,2,3-trimethylindolinone (V) were unsuccessful. If, however, II in cold AcOH is slowly treated with 1 mol. NaNO₂ in a little water and then precipitated with HClO₄, there seps. an oxime perchlorate (VI) which with II in Ac₂O yields HI but also decomp., when heated in Ac₂O, into V, HClO₄ and HCN; in the absence of II this decomposition is very smooth and affords a better method of preparing V than does oxidation of II with KMnO₄. If the formula III is correct, the condensation of II with the 1,3,3,5,7-penta-Me homolog (VII) of VI on the one hand, and of the 1,3,3,5,7-penta-Me homolog of II with VI on the other hand, should give 2 different di-Me derivs., but as a matter of fact the same dye (VIII) was obtained in both cases. This can be explained on the basis of Konig's theory that in dyes of this type the anion is not arrayed with the one or the other N atom but with both simultaneously, giving rise to a system of "fluid heteropolar unions," as represented by formula IX. The derivation of an electronic formula, in which this equivalence of the two N atoms is brought out, is briefly discussed.
 1,3,3-Trimethyl-2-formoxime-indolinium 1-perchlorate (VI) (96% yield), m. 215° (Berl block, corrected) with decomposition Perchlorate of III, m. 267° (Berl block, corrected) with decomposition Free III, m. 147° . VII, m. 210° (decomposition). 5,7-Di-Me derivative (VIII) of III, isolated as the perchlorate, yellow, m. 250.5° (decomposition).
 IT 61575-70-0, Pseudindolium,
 1,3,3-trimethyl-2-(1,3,3-trimethyl-2(3)-indylidenemethyl)-
 (derivs.)
 RN 61575-70-0 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3-trimethyl- (CA INDEX NAME)

L4 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



IT 856069-81-3P, Pseudindolium,
 1,3,3,5,7-pentamethyl-2-(1,3,3-trimethyl-2(3)-indylidenemethyl)-
 perchlorate
 RL: PREP (Preparation)
 (preparation of)
 RN 856069-81-3 CAPLUS
 CN 3H-Indolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-
 1,3,3,5,7-pentamethyl-, perchlorate (1:1) (CA INDEX NAME)
 CM 1
 CRN 856069-80-2
 CMF C25 H31 N2



CM 2
 CRN 14797-73-0
 CMF Cl 04



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(FILE 'HOME' ENTERED AT 09:46:12 ON 17 DEC 2008)

FILE 'REGISTRY' ENTERED AT 09:46:25 ON 17 DEC 2008

L1 STRUCTURE UPLOADED
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L2 3 SEA SSS SAM L1

L3 119 SEA SSS FUL L1

FILE 'CAPLUS' ENTERED AT 09:47:13 ON 17 DEC 2008

L4 74 SEA ABB=ON PLU=ON L3
D QUE L4 STAT
D 1-74 BIB ABS HITSTR

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COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

404.74

583.31

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

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